

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

In the Matter of)
)
Annual Assessment of the Status of) MB Docket No. 02-145
Competition in the Market for the)
Delivery of Video Programming)

NINTH ANNUAL REPORT

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I. INTRODUCTION

1. This is the Commission's ninth annual report ("*2002 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. The *2002 Report* updates the information in our previous reports and provides data and information that summarize the status of competition in the market for the delivery of video programming. 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

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); and ("*2001 Report*"), 17 FCC Rcd 1244 (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).

Notice of Inquiry ("Notice") in this docket.⁴ To the extent that information provided in previous annual reports is still relevant, we do not repeat that information in this report other than in an abbreviated fashion, and provide references to the discussions in prior reports.

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"), 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, and broadband service providers ("BSPs"). 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

4. In the *2002 Report*, we examine the status of competition in the market for the delivery of video programming, discuss changes that have occurred in the competitive environment over the last year, and describe barriers to competition that continue to exist. Overall, although competitive alternatives continue to develop, cable television still is the dominant technology for the delivery of video programming to consumers in the MVPD marketplace. As of June 2002, 76.5% of MVPD subscribers received their video programming from a franchised cable operator, compared to 78% a year earlier.

5. The total number of subscribers to both cable and non-cable MVPDs continues to increase. A total of 89.9 million households subscribe to multichannel video programming services as of June 2002, up 1.8% over the 88.3 million households subscribing to MVPDs in June 2001. This subscriber growth accompanied a 1.2 percentage point decrease in MVPDs' penetration of television households to 85.3% as of June 2002.⁵

6. Since the *2001 Report*, the number of cable subscribers continued to grow, reaching almost 68.8 million as of June 2002, up about 0.4% from the 68.55 million cable subscribers in June 2001.⁶ The total number of non-cable MVPD subscribers grew from 19.3 million as of June 2001 to 21.1 million as of June 2002, an increase of more than nine percent. Although industry data reflect continued growth through June 2002, a number of major cable system operators have experienced significant subscriber losses during this period and calendar year 2002 may be the first year in which the industry as a whole has had a net loss of subscribers.

7. DBS subscribership has grown significantly and now represents 20.3% of all MVPD subscribers. Between June 2001 and June 2002, the number of DBS subscribers grew from almost 16 million households to about 18 million households, which is significantly higher than the cable subscriber

⁴ *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Docket No. 02-145, Notice of Inquiry ("Notice"), 17 FCC Rcd 11579 (2002). Appendix A provides a list of commenters and the abbreviations by which they are identified herein.

⁵ 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.

⁶ The source changed 2001 subscriber data. See Kagan World Media, *Broadband Cable Financial Databook*, July 2002, at 10.

growth rate. 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. DBS attracts former cable subscribers as well as consumers not previously subscribing to an MVPD.

8. Over the last year, the number of subscribers to MMDS and large dish satellite service (HSD) continue to decline. The participation of incumbent local exchange carriers in the distribution of video programming also continue to decline. The number of subscribers to open video systems ("OVS") and private cable has remained relatively stable, although their market share remains small.

9. During the period under review, cable rates continued to rise. According to the Bureau of Labor Statistics, between June 2001 and June 2002, cable prices rose 6.3% compared to a 1.1% increase in the Consumer Price Index ("CPI"), which measures general price changes. Concurrently with these rate increases, the number of video and non-video services offered increased, and programming costs increased. We also note that cable operators' pricing decisions may be affected by direct competition. 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 prices or adding channels without changing the monthly rate, as well as improving customer service and adding new services such as interactive programming. A recent GAO study found that while the provision of local broadcast channels by DBS companies is not associated with lower cable prices, the provision of local broadcast channels by DBS companies is associated with non-price competition. In areas where DBS operators provide local channels, the GAO results indicate that cable companies offer subscribers approximately six percent more channels. According to GAO, this result indicates that cable companies are responding to DBS provision of local channels by improving their quality as reflected by the greater number of channels.⁷

10. The Telecommunications Act of 1996 ("1996 Act") removed barriers to telephone company or local exchange carrier ("LEC") entry into the video marketplace to facilitate competition between incumbent cable operators and telephone companies.⁸ At the time of the 1996 Act, it was expected that LECs would compete in the video delivery market and that cable operators would provide local telephone exchange service. We previously reported that the four largest incumbent local exchange carriers ("ILECs") have largely exited the video business. This remains true today. A few smaller LECs continue to offer, or are preparing to offer, MVPD service over existing telephone lines. Alternatively, several cable multiple system operators ("MSOs") continue to offer telephone service. Cable operators are beginning to deploy Internet protocol ("IP") telephony solutions in addition to circuit-switched telephony offerings. Cable operators, such as Cox and AT&T, continue to deploy circuit-switched cable telephony. Others, like Cablevision and Comcast, continue to offer cable telephony where it has already been deployed, but generally are waiting for IP technology to become widely available before accelerating their rollout of telephone service. AT&T, AOL Time Warner, Comcast, Cox, and Charter are currently offering or continuing to test IP telephony products.

11. The most significant convergence of service offerings continues to be the pairing of Internet service with other service offerings. Cable operators continue to build-out the broadband infrastructure that permits them to offer high-speed Internet access. The most popular way to access the Internet over cable is still through the use of a cable modem and personal computer, though a small number of users continue to access the Internet through their television and a specially designed set-top box, rather than

⁷ U.S. General Accounting Office, *Issues in Providing Cable and Satellite Television Services*, GAO-03-130 (October 2002) ("GAO 2002 Report") at 9-10. See also U.S. General Accounting Office, *Telecommunications: The Effect of Competition From Satellite Providers on Cable Rates*, GAO/RCED-00-164 (July 2000).

⁸ Pub. L. No. 104-104, 110 Stat. 56 (1996).

the personal computer. Virtually all of the major MSOs offer Internet access via cable modems in portions of their service areas. Like cable, the DBS industry is developing ways to bring advanced services to their customers. For example, DirecTV currently offers one-way and two-way satellite-delivered Internet service under the brand name DirecWay. Many MMDS and private cable operators also offer Internet access services. In addition, broadband service providers continue to build advanced systems specifically to offer a bundle of services, including video, voice, and high-speed Internet access.

12. Non-cable MVPDs continue to report that regulatory and other barriers to entry limit their ability to compete with incumbent cable operators. Non-cable MVPDs continue to experience some difficulties in obtaining programming from vertically-integrated cable programmers and from unaffiliated programmers which continue to make exclusive agreements with cable operators. In multiple dwelling units ("MDUs") potential entry may be discouraged or limited because an incumbent video programming distributor has a long-term and/or exclusive contract. In addition, non-cable MVPDs report problems obtaining franchises from local governments and difficulties in gaining access to utility poles needed to build out their systems.

13. Our findings as to particular distribution technologies operating in the market for the delivery of video programming include the following:

- **Cable Systems:** Since the *2001 Report*, there has been only marginal cable television industry growth in terms of subscribership (a 0.4% increase from June 2001 to June 2002), with a number of individual operators facing actual subscriber declines. The industry has continued to grow in terms of revenues (an approximate 15.9% increase between 2000 and 2001), prime time audience shares (which rose from an average 51.9 share between July 2000 and 2001 to an average 56.5 share between July 2001 and June 2002), and expenditures on programming. The number of national satellite-delivered video programming services increased last year, from 287 to 308, between June 2001 and June 2002.
- The cable industry has continued to invest in improved facilities. As a result, there have been increases in channel capacity, the deployment of digital transmissions, and non-video services such as Internet access and telephony.
- **Direct-to-Home ("DTH") Satellite Service (DBS and HSD):** Video service is available from high power DBS satellites that transmit signals to small DBS dish antennas installed at subscribers' premises (DBS service), and from low power satellites requiring larger antennas (HSD service). DBS has over 18 million subscribers, an increase of approximately 14% since the *2001 Report*. Between June 2001 and June 2002, the number of HSD subscribers, measured as the number of HSD users that actually purchase programming packages, declined from one million to 700,000, a decrease of about 30%. DirecTV and EchoStar are each among the five largest providers of multichannel video programming service. In June 2002, DBS represented a 20.3% share of the national MVPD market and HSD represented another 0.8% of that market.
- **Wireless Cable Systems:** Currently, the wireless cable industry ("MMDS") provides competition to the cable industry in limited areas. MMDS subscribership declined between June 2001 and June 2002 from approximately 700,000 subscribers to 490,000 subscribers. 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 0.6% share of the national MVPD market in June 2002.

- **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. Private cable subscribership increased slightly from 1.5 million subscribers last year to 1.6 million subscribers as of June 2002, representing approximately 1.8% of national MVPD subscribership.
- **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 *2001 Report*, the broadcast industry has continued to grow in the number of operating stations (from 1,678 in 2001 to 1,712 in 2002). Broadcast stations and networks, like MVPDs and non-broadcast networks, derive revenue from advertising. Advertising revenues and audience levels, however, declined for broadcasters in 2001, though low advertising figures are partly attributable to the generally slow economy in 2001. In 2001, advertising revenues were approximately \$36 billion, a 12% decrease over 2000 when advertising revenues were \$41 billion. Audience levels continue to decline as they have for many years. During the 2001-2002 television season, the broadcast television networks accounted for an average 59 share of prime time viewing for all television households, compared to an average 63 share a year earlier. Broadcast television stations continue to deploy digital television (“DTV”) service. Ninety percent of the more than 1,300 commercial television stations have been granted DTV construction permits or licenses and 643 are on the air with DTV operation.
- **LEC Entry:** The 1996 Act expanded opportunities for LECs to enter the market for the delivery of video programming. In the *2001 Report*, we noted that ILECs have largely exited the video business. BellSouth, however, continues to operate some overbuild cable systems, and a number of smaller LECs that are offering, or preparing to offer, video service over telephone lines. Qwest Communications International (formerly US West) continues to offer video, high-speed Internet access, and telephone service over existing copper telephone lines using very high-speed digital subscriber line (“VDSL”) in several markets. Reports indicate that 45 LECs, mostly small, also are using VDSL to offer a bundle of services, including video, over telephone lines.
- **Open Video Systems:** In the 1996 Act, Congress established a new framework for the delivery of video programming – open video system (“OVS”). Under these rules, a LEC or other entrant may provide video programming to subscribers, although the OVS operator must provide non-discriminatory access to unaffiliated programmers on a portion of its channel capacity.
- **Broadband Service Providers:** Broadband service providers are 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. RCN is the largest BSP, serving approximately 507,000 subscribers. WideOpenWest (“WOW”) is the second largest BSP with cable systems serving about 313,000 subscribers. The third largest BSP is Knology, which currently serves approximately 120,000 subscribers.

- **Internet Video:** As of June 2002, an estimated 54 million Americans subscribed to an Internet access service, compared with 50 million as of June 2001. Real-time and downloadable video accessible over the Internet continues to become more widely available and the amount of content also is increasing. 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 service.
- **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 offering of MVPDs. About 90% of all U.S. households have at least one VCR. The number of homes with DVD players has grown rapidly since their introduction, with 14 million DVD homes by the end of 2001. The newest home video technology is the personal video recorder ("PVR"). One source reports that one million homes currently have PVRs.
- **Electric and Gas Utilities:** Several electric and gas utilities continue to move forward with ventures involving multichannel video programming distribution. 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 450 public power systems offer communications services, up from 357 offering service last year.

14. We also find that:

- Consolidation within the cable industry continues as cable operators acquire and trade systems. The ten largest operators served about 85% of all U.S. cable subscribers. In terms of one traditional economic measure, national concentration among the top MVPDs has decreased since last year as the largest MSOs continue to become more equal in size, and it remains below the levels reported in earlier years.⁹ DBS operators DirecTV and EchoStar rank among the five largest MVPDs in terms of nationwide subscribership along with three cable MSOs. As of June 2002, slightly more than 52 million of the nation's cable subscribers were served by systems that are included in regional clusters.
- The number of satellite-delivered programming networks has increased from 287 in 2001 to 308 in 2002. Vertical integration of national programming services between cable operators and programmers decreased to 30%, after remaining steady at 35% over the last couple of years. In 2002, four 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 *2002 Report* identifies at least 86

⁹ 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. 437 *infra*.

regional networks, 31 of which are sports channels, many owned at least in part by MSOs. There are also 32 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, could have an impact on the ability of alternative MVPDs to compete in the video marketplace.
- Cable operators and other MVPDs continue to develop and deploy advanced technologies, especially digital compression techniques, to increase capacity and enhance the capabilities of their transmission platforms. These technologies allow MVPDs to deliver additional video options and other services (*e.g.*, data access, telephony, and interactive services such as video-on-demand) to subscribers.
- There have been a number of technical developments regarding cable modems and navigation devices used to access a wide range of services offered by MVPDs. To date, CableLabs has certified over 224 DOCSIS 1.0 compliant cable modems and 48 DOCSIS 1.1 compliant modems. CableLabs continues to advance development of the specification, releasing version 2.0 in January 2002. CableLabs is also continuing its efforts to develop next generation navigation devices with its initiative for the OpenCable Application Platform ("OCAP") or "middleware" software specification. The specification, which was introduced in December 2001, is designed to enhance the ability of the consumer electronics industry to build and market integrated DTV sets, digital set-top boxes, and other navigation devices directly to consumers. One major television manufacturer, Panasonic, has signed the CableLabs POD-Host Licensing Agreement ("PHILA"), allowing it to develop, manufacture, and market digital televisions that will be able to receive high definition and other digital programs via cable, including premium services, without the use of set-top boxes. COMPETITORS

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

A. Cable Television Service

15. This section addresses the performance of franchised cable system operators during the past year.¹⁰ 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 is offered in conjunction with, and over the same facilities as, video service.

1. General Performance

16. Since our last *Report*, the cable industry has continued to grow in terms of homes passed,¹¹ basic tier cable subscribership,¹² premium service subscriptions,¹³ basic tier cable viewership, and channel capacity.¹⁴ Basic tier cable penetration, the ratio of the number of cable subscribers to the total number of households passed by the system continues to decline. Deployment of advanced broadband service offerings continued to increase during 2001 and the first half of 2002. These services include offerings of digital video, high-speed Internet access services through cable infrastructure, interactive cable services,¹⁵ and facilities-based cable telephony.

17. *Cable's Capacity to Serve Television Households*. As we have previously noted, 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").¹⁶ In its

¹⁰ 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).

¹¹ Homes passed is the total number of households capable of receiving cable television service.

¹² 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), (1)(2).

¹³ 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. 47 U.S.C. § 543(b)(7), (1)(2).

¹⁴ Channel capacity is number of channels dedicated to video use based on other use considerations. 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.

¹⁵ The interactive cable services discussed here include video-on-demand ("VOD"), interactive guides, and interactive television ("ITV").

¹⁶ 2001 *Report*, 17 FCC Rcd at 1254; Nielsen Media Research.

comments, NRTC again argues that the widely-used measure of availability (homes passed as a percentage of television households) is fundamentally flawed.¹⁷ NRTC states that not only is the data for homes passed inflated, but that cable's availability varies depending on whether the comparison is based on TV households, all households, all occupied housing units, or all housing units in the United States, as some have suggested might be the better comparison.¹⁸ NRTC suggests that the measurement of the availability of cable be based on the number of housing units and not TV households.¹⁹ NRTC states that cable's availability could be as low as 78%.²⁰

18. As NRTC's comments indicate, the calculation of cable availability has been and remains a subject of controversy.²¹ 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. In our order designating the EchoStar-DirecTV merger application for hearing, we observed that significant discrepancies can arise, for example, upon comparison of the Kagan 2001 homes passed figure with one from Warren Communications News.²² These differences suggest that the Kagan data should be used with a good deal of caution and that they are most reliable as a trend indicator, rather than a precise estimate for any one year. In fact, homes passed data evaluated in the context of our review of the proposed DBS merger indicated that the number of homes not passed by cable in fact may vary from the 4% claimed by the two DBS operators to 21.28% using alternative estimation methods.²³ Based on the available data, however, the Commission was unable to determine whether either of these values or another value correctly estimates the percentage of homes passed. Thus, because of the significance of this calculation in terms of the potential competitive harms posed by the merger of the two DBS operators, the issue of the precise measure of cable availability was designated for hearing.²⁴

19. Since we are unable to resolve this factual question, 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, cable availability was estimated to be approximately 97.6% of TV households, as of June 2002, up 0.3% from year-end 2001. Regardless of whether cable availability is ultimately determined to be 97.5% or 78%, it is reasonable for purposes of this *Report* to conclude that the share of television households passed by cable is very high and has been rising gradually over time.

¹⁷ NRTC Comments at 5-7; *see also* 2001 Report, 17 FCC Rcd at 1254.

¹⁸ NRTC Comments at 5-7.

¹⁹ *Id.*

²⁰ *Id.*, at 5. *See also* NRTC Comments in *Application of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation, Transferors and EchoStar Communications Corporation, Transferee*, CS Docket No. 01-348, Feb. 24, 2002, at 6-14.

²¹ 2001 Report, 17 FCC Rcd at 1254; *See also* *Application of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation, Transferors and EchoStar Communications Corporation, Transferee*, CS Docket No. 01-348, Hearing Designation Order ("*EchoStar-Hughes HDO*"), FCC 02-284 (rel. Oct. 18, 2002), ¶¶ 122-25 (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).

²² *EchoStar-Hughes HDO* ¶ 124 and n.356.

²³ *Id.*

²⁴ *Id.*

TABLE 1: Cable Television Industry Growth: 1997 - June 2002 (in millions)²⁵

Year-End	Television Households ("TH")		Homes Passed ("HP")		Basic Subscribers ("Subs")		HH Passed by Cable (HP/TH)	HHs Subscribing (Subs/TH)	U.S. Penetration (Subs/HP)
	Total	% Change	Total	% Change	Total	% Change			
1997	98.0	1.0%	94.6	1.0%	64.8	2.0%	96.5%	66.1%	68.5%
1998	99.4	1.4%	96.0	1.5%	66.1	2.0%	96.6%	66.5%	68.9%
1999	100.8	1.4%	97.4	1.5%	67.3	1.8%	96.6%	66.8%	69.1%
2000	102.2	1.4%	98.8	1.4%	68.5	1.8%	96.7%	67.0%	69.3%
2001	105.4	3.1%	102.0	3.2%	68.6	0.1%	96.8%	65.1%	67.3%
June 2002 ²⁶	105.4 ²⁷	0.0%	102.8	0.8%	68.8	0.3%	97.5%	65.3%	66.9%

20. **Subscribership.** As shown in Table 1, the number of subscribers and the number of homes passed are increasing.²⁸ Since its peak at year-end 2000, cable penetration (*i.e.*, subscribers as a percentage of homes passed) has declined because the number of homes passed has increased at a faster rate than the number of subscribers. The percentage of TV households subscribing to cable also declined during 2001, before increasing 0.2 percentage points in the first half of 2002 because the number of television households grew at a faster rate than the number of homes subscribing.²⁹

²⁵ Nielsen Media Research; Kagan World Media, *Cable TV Investor*, May 24, 2002, at 9; Kagan World Media, *Broadband Cable Financial Databook*, July 2002, at 10. Historical data included in this table may differ from those previously reported because some data have been updated by the source.

²⁶ Homes Passed and Subscribers June 2002 data are based on a 2002 year-end estimate.

²⁷ Nielsen Media Research estimates the number of television households annually, and industry practice is to use this figure throughout the television broadcast season, which begins in September and ends in August of the following calendar year. Thus, the figure for TV households in June 2001 is the same as the figure for December 2000.

²⁸ The number of subscribers reported by some MSO has been the subject of recent controversy. For example, in June 2002, Adelphia revised its 2001 basic subscriber figures from 5.81 million down to 5.76 million, citing "inaccuracies in previously reported data." See *Adelphia Restates Results After Dismissing Deloitte*, The New York State Society of CPA's, at <http://www.nysscpa.org/home/2002/2week/article14.htm>. Charter Communications announced in November 2002 that it is participating in an informal SEC inquiry into how it accounts for its customers, and is also the subject of a similar Justice Department investigation involving a grand jury. Riva D. Atlas and Geraldine Fabrikant, *Large Cable Operator to Restate Its Results for 2000 and 2001*, NEW YORK TIMES, Nov. 20, 2002, at C1. In addition, some MSOs are reporting a decline in subscribership due to subscriber churn. AT&T Broadband reported 13.6 million subscribers as of year end 2001 and 13.2 million subscribers as of June 2002. AT&T Broadband, *AT&T Group Earnings Commentary: Fourth Quarter 2001*, Jan. 30, 2002, at 14; AT&T Broadband, *AT&T Group Earnings Commentary: Second Quarter 2002*, July 23, 2002, at 12. AT&T's subscriber loss is attributable to churn. See Letter from. Letter from James L. Casserly, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 02-70 (Nov. 13, 2002), at 1-2.

²⁹ The increase in the percent of TV households subscribing to cable after the previous year's decline could be based on the static measurement of TV households between year-end 2001 and June 2002.

21. The number of homes subscribing to one or more premium cable services continues to increase, as shown in Table 2 below. The number of premium services to which homes are subscribing (also known as "pay units") also continues to increase. In addition, the average number of subscriptions per premium subscriber is increasing, from an average 1.66 subscriptions per subscriber at year-end 2000 to an average 1.79 subscriptions per subscriber at year-end 2001, to an estimated average of 1.82 subscriptions per premium subscriber as of June 2002.

TABLE 2: Premium Cable Services: 1997 - June 2002 (in millions)³⁰

Year End	Premium Cable Service Subscribers (Pay HH)		Premium Cable Service Subscriptions (Pay Units)	
	Year End Total	% Change	Year End Total	% Change
1997	31.7	3.6%	49.1	2.3%
1998	32.8	3.5%	49.3	0.4%
1999	34.2	4.3%	50.5	2.4%
2000	35.6	4.1%	59.9	18.6%
2001	36.1	1.4%	64.8	8.2%
June 2002 ³¹	36.4	0.8%	66.2	2.1%

22. **Channel Capacity.** Cable operators have invested substantial sums of money over the past decade to upgrade channel capacity, both by expanding bandwidth, and by employing digital compression technologies. Previously, channel capacity was reported as the number of analog channels available for use by a cable system.³² With recent technological advances, channel capacity is now a function of the amount of bandwidth a cable operator chooses to use for video services based on a number of considerations. Thus in the absence of information on the number of channels devoted to digitally compressed signals and the precise compression ratio used, it is not possible to infer from available data the number of video channels available to cable subscribers, even on average.

23. The Commission's *2001 Price Survey Report*³³ provides figures on the cable system capacity and channel allocation for cable systems responding a Commission survey, as shown in Table 3. It shows

³⁰ Kagan World Media, *Cable TV Investor*, May 24, 2002, at 9; Kagan World Media, *Broadband Cable Financial Databook*, July 2002, at 10. Historical data included in this table may differ from those previously reported because some data have been updated by the source.

³¹ June 2002 data is based on a year-end estimate.

³² *2001 Report*, 17 FCC Rcd at 1254.

³³ *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Prices for Basic Service, Cable Programming Services, and Equipment*, MM Docket No. 92-266, Report on Cable Industry Prices ("*2001 Price Survey Report*"), 17 FCC Rcd 6301 (2002). Section 623(k) of the Communications Act, as amended by the Cable Television Consumer Protection and Competition Act of 1992 ("*1992 Cable Act*"), requires the Commission to publish annually a statistical report on cable prices, or more specifically, average rates for the delivery of basic cable service, cable programming service, and equipment. Section 623(k) was adopted as Section 3(k) of the 1992 Cable Act, Pub. L. No. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 543(k); *See* 47 U.S.C. § 543(k). The 1992 Cable Act defines basic cable service as the tier of service that includes the retransmission of local television broadcast signals. *See* 47 U.S.C. § 543(b)(7). Cable programming service is defined as 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)(1)(2). Equipment refers (continued....)

that approximately two-thirds of the sampled cable systems (both competitive and non-competitive systems)³⁴ have facilities that provide bandwidth of 750 MHz or above.³⁵ The average system capacity in the Survey is approximately 650 MHz. As discussed above, capacity is allocated among the various services that cable operators provide, including video services. The average system in the survey devotes 82.5 channels or 495 MHz to video delivery to be divided among analog channels and digitally compressed channels.

TABLE 3: Channel Capacity

	Competitive Group		Noncompetitive Group	
	July 2000	July 2001	July 2000	July 2001
Average system capacity (MHz)	630	666	623	652
Percent of systems with capacity of:				
330 MHz and below	10.0%	8.5%	9.0%	8.3%
331 through 749 MHz	31.7%	22.8%	36.9%	28.5%
750 MHz	58.3%	68.7%	54.1%	63.2%
Number of 6 MHz activated channels:				
Devoted to analog service	69.2	72.0	67.7	69.9
Devoted to digital service	6.7	11.3	7.0	11.8
Total number of channels	75.9	83.3	74.4	81.7

24. *Viewership.* Viewership, when measured in audience shares of cable networks,³⁶ continues to grow, while viewership shares of broadcast television stations³⁷ continue to decline.³⁸ Audience share³⁹ statistics for total day viewing,⁴⁰ show that cable audience shares rose from an average 54.2 share

(...continued from previous page)

to a converter box, remote control, and other equipment necessary to access programming. See 47 U.S.C. § 543(b)(3).

³⁴ 2001 Price Survey Report, 17 FCC Rcd at 6313, 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 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 6304-05.

³⁵ According to NCTA, approximately 74% of all cable homes (or approximately 51 million cable homes) were passed by systems with a capacity of at least 750 MHz, and approximately 68% of homes passed (or 70 million households) were passed by activated two-way plant. NCTA Comments at 26. These data differ from data reported in the 2001 Price Survey Report. This is likely due to differing measurement methodologies.

³⁶ Cable network shares include basic (BST and CPST), premium, and PPV cable networks.

³⁷ "Broadcast" shares include network affiliates, independent, and public television stations.

³⁸ See 2001 Report, 17 FCC Rcd at 1256.

³⁹ A share is the percent of all households using television during the time period that are viewing the specified station(s) or network(s). The sum of reported audience shares exceeds 100% due to simultaneous multiple set viewing.

⁴⁰ Total day viewing is 24 hours, 6 am - 6 am.

between July 2000 and June 2001, to an average 58.3 share between July 2001 and June 2002.⁴¹ Broadcast television audience shares for total day viewing decreased from an average 56.8 share from July 2000 through June 2001, to an average 53.0 share between July 2001 and June 2002.⁴² Audience share statistics for prime time⁴³ show that cable audience shares rose from an average 51.9 share between July 2000 and June 2001, to an average 56.5 share between July 2001 and June 2002.⁴⁴ Broadcast television audience shares for prime time viewing decreased from an average 63.8 share from July 2000 through June 2001, to an average 59.4 share between July 2001 and June 2002.⁴⁵

25. *Cable Networks.* As discussed in Section III.B., the number of nationally delivered basic cable networks available for delivery by cable operators increased over the last year from 287 networks as of June 2001 to 308 in June 2002.⁴⁶ In addition, there also were 85 regional cable networks available for carriage by cable system operators as of April 2002, and about 59 planned networks.⁴⁷

26. *Programming Costs.* Cable system operators spent nearly \$9.3 billion on programming in 2001.⁴⁸ Of that \$9.3 billion, more than \$7 billion was spent to acquire basic cable network programming.⁴⁹ Programming expenses incurred by cable operators for copyright fees for broadcast signal carriage pursuant to Section 111 of the Copyright Act⁵⁰ amounted to approximately \$121.7 million in 2001.⁵¹ It is estimated that cable operators will spend more than \$10 billion to acquire programming in 2002.⁵²

2. Financial Performance

27. Cable industry revenue and cash flow indicate increasing industry growth over the last year and a half, after several years of slow growth. Stock prices, however, continue to decline, signaling investor apprehension.

⁴¹ Nielsen Media Research, *Total Day 24 Hours 6 am - 6 am: Total US Ratings By Viewing Source July 2000-June 2002*, Oct. 2002. Last year, we compared only non-premium cable viewing shares to all broadcast television station viewing shares. This year, we include viewing trends from all cable network sources. For broadcast season (September to August) viewing trends, see ¶ 80 *infra*.

⁴² *Id.*

⁴³ Prime time viewing is Monday through Saturday 8 pm-11 pm and Sunday 7 pm-11 pm.

⁴⁴ Nielsen Media Research, *Primetime Monday-Saturday 8-11 PM Sunday 7-11 PM: Total US Ratings By Viewing Source July 2000-June 2002*, Oct. 2002. For broadcast season (September to August) viewing trends, see ¶ 80 *infra*.

⁴⁵ *Id.*

⁴⁶ See *2001 Report*, 17 FCC Rcd at 1309-10. Last year, we estimated the number of national programming services at 294. NCTA notes in its latest Cable Developments, that there were errors in this calculation, and that the number of national programming networks was actually 287. See NCTA, *National Video Programming Services: 1994-2001*, Cable Developments 2002, May 2002, at 23.

⁴⁷ See Appendix C, Table C-3 and C-4.

⁴⁸ NCTA Comments at 37.

⁴⁹ Kagan World Media, *Basic Cable Network Economics 2002*, at 27; Kagan World Media, *Pay TV Newsletter*, July 2002.

⁵⁰ Copyright Act, 17 U.S.C. § 111 *et seq.*

⁵¹ Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Nov. 27, 2002. 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.

⁵² NCTA Comments at 37.

28. **Cable Industry Revenue.** As Table 4 shows, annual cable industry revenue grew 15.9% during 2001, reaching more than \$43.9 billion in total revenue, with growth in every revenue segment. Both video and non-video advanced services constitute the greatest increases in revenue for cable operators during 2001. Analysts estimate that by year-end, cable operator total revenue for 2002 will reach nearly \$50 billion, with video and non-video services again estimated to constitute the greatest increases for cable operators.

29. **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. Cash flow from operations is the net result of cash inflows from operations (revenue) and cash outflows from operations (expenses). Cash flow from operations does not include non-cash charges to net income such as depreciation and amortization. Cash flow from operations indicates a firm's ability to meet its net finance and investment obligations. As Table 4 shows, cash flow from operations increased during 2001, though cash flow as a percentage of revenue (cash flow margin) declined for the second year in a row. That is, revenues are increasing at a greater rate than cash flow, indicating that cable operator expenses have increased faster than revenues over the last year.

TABLE 4: Cable Industry Revenue and Cash Flow: 1998 – 2002⁵³

	1998	1999	98-99	2000	99-00	2001	00-01	2002	01-02
	Total	Total	% Change	Total	% Change	Total	% Change	Estimated Year-End Total	% Change
Basic Subscribers (mil)	66.1	67.3	1.8%	68.5	1.8%	68.6	0.1%	69.0	0.6%
Revenue Segments (mil.)									
Basic Service and CPST Tiers	\$21,831	\$23,135	6.0%	\$24,729	6.9%	\$27,031	9.3%	\$28,492	5.4%
Premium (Pay) Tiers	\$4,758	\$4,696	-1.3%	\$5,115	8.9%	\$5,617	9.8%	\$5,533	-1.5%
Pay-Per-View	\$514	\$721	40.3%	\$751	4.2%	\$993	32.2%	\$1,143	15.1%
Local Advertising	\$1,675	\$2,000	19.4%	\$2,430	21.5%	\$2,430	0.0%	\$2,503	3.0%
Home Shopping	\$175	\$205	17.1%	\$239	16.6%	\$260	8.8%	\$284	9.2%
Advanced Analog and Digital Tier	\$445	\$919	106.5%	\$1,088	18.4%	\$2,365	117.4%	\$3,379	42.9%
High-speed Internet access, cable teleph. & interactive svcs	\$133	\$542	307.5%	\$1,164	114.8%	\$2,835	143.6%	\$5,602	97.6%
Equipment and Install	\$2,631	\$2,424	-7.9%	\$2,451	1.1%	\$2,463	0.5%	\$2,491	1.1%
Total Revenue (mil.)	\$32,162	\$34,642	7.7%	\$37,967	9.6%	\$43,994	15.9%	\$49,427	12.3%
Revenue Per Subscriber	\$486.57	\$514.74	5.8%	\$554.26	7.7%	\$641.31	15.7%	\$716.33	11.7%
Operating Cash Flow (mil.)	\$14,900	\$15,597	4.7%	\$15,764	1.1%	\$16,683	5.8%	\$18,806	12.7%
Cash Flow per Subscriber	\$225.42	\$231.75	2.8%	\$230.13	-0.7%	\$243.19	5.7%	\$272.55	12.1%
Cash Flow/Total Revenue	46.3%	45.0%	-2.8%	41.5%	-7.8%	37.9%	-8.7%	38.0%	0.3%

30. **Cable System Transactions.** Over the last several years, as Table 5 shows, the number of system acquisitions and exchanges between MSOs has declined. Several mergers among large operators

⁵³ Kagan World Media, Cable TV Investor, May 24, 2002, at 9; Kagan World Media, Broadband Cable Financial Databook, July 2002, at 10 and 144. Historical data included in this table may differ from those previously reported because some data have been updated by the source.

which involve the transfer and exchange of numerous systems, however, are not reflected in Table 5.⁵⁴ In addition, the industry benchmark average "value per subscriber" has declined from its peak of an average value of more than \$5,700 per subscriber in 2000, to an average of approximately \$2,200 as of June 2002.⁵⁵

TABLE 5: System Transactions: 1999 - June 2002⁵⁶

	1999	2000	99-00 % Change	2001	00-01 % Change	Jan-Jun 2002
Number of Systems Sold	92	45	-51.1%	36	-20.0%	12
Total Number of Subscribers Sold	18,288,706	11,469,090	-37.3%	17,958,375	56.6%	388,120
Average Number of Subscribers per System Sold	198,790	254,869	28.2%	498,844	95.7%	32,343
Total Number of Homes Passed Sold	28,345,972	18,990,621	-33.0%	31,657,221	66.7%	666,216
Average Number of Homes Passed per System Sold	308,108	422,014	37.0%	879,367	108.4%	55,518
Total Dollar Value (mil.)	\$73,070	\$66,008	-9.7%	\$87,499	32.6%	\$852
Average Dollar Value (mil.) of System Sold	\$794	\$1,467	84.8%	\$2,431	65.7%	\$71
National Average Dollar Value Per Subscriber ⁵⁷	\$3,995	\$5,755	44.1%	\$4,872	-15.3%	\$2,196
Dollar Value Per Home Passed	\$2,578	\$3,476	34.8%	\$2,764	-20.5%	\$1,281
Cash Flow Multiple	16.7x	19.5x	16.8%	19.3	-1.0%	11.2

31. **Stock Prices.** Cable stock prices, as measured by the Kagan MSO Average, declined 14.5% in 2001, whereas the S&P 500 declined 13% in 2001, and the NASDAQ declined 21%.⁵⁸ In the first half of 2002, the Kagan MSO Average declined 38% over year-end 2001. The delisting of Adelphia Communications in May 2002 contributed to this decline.⁵⁹ Despite recent declines, however, many Wall

⁵⁴ 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); *Applications for Consent to the Transfer of Control of Licenses, Comcast Corporation and AT&T Corp., Transferors, to AT&T Comcast Corporation, Transferee*, Report and Order ("AT&T-Comcast Merger Order"), FCC 02-310, (Nov. 14, 2002).

⁵⁵ The value of 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.

⁵⁶ Kagan World Media, Cable TV Investor, Jan. 25, 2002, at 11; Kagan World Media, Cable TV Investor, July 18, 2002, at 9. Historical data included in this table may differ from those previously reported because some data have been updated by the source.

⁵⁷ See fn. 55 *supra*.

⁵⁸ Kagan World Media, Broadband Cable Financial Databook, July 2002, at 89.

⁵⁹ *Id.*

Street analysts expect that the cable industry will outperform the S&P 500 and media stocks in general in 2002-2003.⁶⁰

3. Capital Acquisition and Disposition

32. 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.

TABLE 6: Acquisition of Capital: 1994 - June 2002 (\$ in millions)⁶¹

Year	Private Debt		Net New Public Debt		Private Equity (Pvt. Placement/VC)		Public Equity (Common/Preferred)		Total Capital Raised in Year
	Amount Raised	% of Total Raised in Year	Amount Raised	% of Total Raised in Year	Amount Raised	% of Total Raised in Year	Amount Raised	% of Total Raised In Year	
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%	\$200	1.4%	\$1,927	13.9%	\$13,847
1999	\$34,358	51.9%	\$18,610	28.1%	\$5,385	8.1%	\$7,799	11.8%	\$66,151
2000	\$2,755	60.3%	\$4,288	35.7%	\$101	0.8%	\$380	3.2%	\$12,024
2001	\$6,668	31.4%	\$10,678	50.2%	\$623	2.9%	\$3,282	15.4%	\$21,251
June 2002	\$2,157	19.9%	\$5,070	46.8%	\$0.0	0.0%	\$3,608	33.3%	\$10,834
Total Raised: 1994-June 02	81,769	47.6%	\$58,202	33.9%	8,941	5.2%	22,923	13.3%	\$171,835
Avg Raised Per Year	\$9,620		\$6,847		1,052		2,697		\$20,216

33. Capital Expenditures/Capital Investment. Since 1996, cable operators have invested more than \$65 billion to upgrade systems in order to deploy higher quality television and advanced two-way broadband services.⁶² The rebuilding of more than a million miles of cable plant, which is nearly 80% complete, has translated into numerous new services, such as digital video, digital music, high-speed Internet access, cable telephony, video-on-demand, and other interactive applications.⁶³ In 2001, the

⁶⁰ Richard Bilotti and Benjamin Swinburne, *New Ratings System*, Morgan Stanley, Mar. 18, 2002; *Adelphia Aside: Financial Analysts Tell NCTA Cable's Day Will Come Again*, Comm. Daily, May 8, 2002, at 6; Spencer Wang, John Blackledge, and Thomas Sheehan, *Media & Entertainment: Media Mosaic 2002-A Manifesto for Media Investing in 2002*, ABN-Amro, Jan. 3, 2002, at 4.

⁶¹ Kagan World Media, *Cable TV Finance*, Feb. 8, 2002, at 8; Kagan World Media, *Cable TV Finance*, Aug. 21, 2002, at 7. Historical data included in this table may differ from those previously reported because some data have been updated by the source.

⁶² NCTA Comments at 4.

⁶³ *Id.*

cable industry spent a total of \$17.8 billion in capital expenditures.⁶⁴ Cable operators spent approximately \$850 million on the construction of new plant, \$4.1 billion on upgrades, \$2.4 billion on rebuilds, \$6.5 billion on new equipment, and \$4.0 billion on maintenance of new and existing equipment.⁶⁵ This represents a 14.6% increase over the \$15.5 billion spent in 2000.⁶⁶ Analysts expect that operators will spend an estimated \$17.6 billion in 2002, a decrease of 0.9% over 2001.⁶⁷ Of the \$17.8 billion to be spent industry-wide, it is estimated that approximately \$823 million will be spent on construction of new cable plant, \$2.2 billion on rebuilds, \$3.5 billion on upgrades, \$7.1 billion on equipment and \$4.0 billion on maintenance.⁶⁸

34. MSOs continue to spend substantially on maintenance, upgrades, rebuilds, and new services, though with industry upgrade goals near completion, many cable operators have already begun to spend less on capital improvements.⁶⁹ For example, Comcast reported capital expenditures of \$2.2 billion in 2001, and is expected to spend approximately \$1.5 billion in 2002.⁷⁰ As of June 30, 2002, Comcast had spent about \$789 million.⁷¹ Cablevision reported total capital expenditures of about \$1.3 billion in 2001 (\$900 million of which was for cable television services), and is expected to spend \$1 billion in 2002.⁷² Cox reports capital spending of \$2.2 billion on capital expenditures in 2001.⁷³ As of June 2002, Cox had spent approximately \$1 billion, and expects that by year-end it will have spent a total of \$2 billion.⁷⁴ Charter reported cable capital expenditures of \$3 billion in 2001, and is expected to spend approximately \$2.5 billion during 2002.⁷⁵ As of June 30, 2002, Charter had already spent \$1.1 billion in capital

⁶⁴ Kagan World Media, Cable TV Finance, June 7, 2002, at 3; see also NCTA Comments at 25. As a result of these expenditures, approximately 74% of all cable homes (or approximately 51 million cable homes) were passed by systems with a capacity of at least 750 MHz, and approximately 68% of homes passed (or 70 million households) were passed by activated two-way plant. NCTA Comments at 26.

⁶⁵ Kagan World Media, Cable TV Finance, June 7, 2002, at 3. "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. See also NCTA Comments at 25.

⁶⁶ Kagan World Media, Cable TV Finance, June 7, 2002, at 3.

⁶⁷ *Id.* See also NCTA Comments at 25.

⁶⁸ Kagan World Media, Cable TV Finance, June 7, 2002, at 3.

⁶⁹ NCTA estimates that the rebuilding of cable plant is nearly 80% complete. NCTA Comments at 4. For example, Cablevision envisions "completion of the company's entire network upgrade to 750 MHz in 2003." Cablevision Systems Corp., *Cablevision Systems Corporation Announces Fully-Funded Growth Plan* (press release), Aug. 8, 2002.

⁷⁰ Comcast Corp., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 25 and 41. Comcast's merger with AT&T could affect Comcast's year-end expenditures. See fn. 78 *infra*.

⁷¹ Comcast Corp., *SEC Form 10-Q for the Quarter-Ended June 30, 2002*, at 4.

⁷² Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter 2001 Financial Results for Cablevision NY Group and Rainbow Media Group* (press release), Feb. 14, 2002. Cablevision expects completion of the company's entire network upgrade to 750 MHz by year-end 2003. Cablevision Systems Corp., *Cablevision Systems Corporation Announces Fully-Funded Growth Plan* (press release), Aug. 8, 2002.

⁷³ Cox Communications, Inc., *SEC Form 10-K405/A For the Year-Ended December 31, 2001*, at 3.

⁷⁴ Cox Communications, Inc., *SEC Form 10-Q For the Quarter-Ended June 30, 2002*, at 12; Cox Communications, Inc., *Cox Communications Announces Second Quarter Financial Results For 2002* (press release), July 31, 2002.

⁷⁵ Charter Communications, Inc., *SEC Form 10-K405 for the Year-Ended December 31, 2001*, at 46. As a result of these expenditures, 75% of Charter subscribers were served by systems with a capacity of 750 MHz or greater, with 34% of Charter subscribers served by systems with a capacity of 850 MHz, and more than 78% of Charter subscribers are served by systems with two-way capability. Charter expects by year-end 2002, nearly 85% of its

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expenditures.⁷⁶ AOL Time Warner spent \$2.2 billion on cable-related capital expenditures during 2001, and has spent \$975 million on cable-related capital expenditures during the first half of 2002.⁷⁷ AT&T Broadband reported capital expenditures of approximately \$3.3 billion in 2001, of which \$1.5 billion was related to the growth and support of advanced services and \$583 million was for network construction and upgrade.⁷⁸ As of June 2002, AT&T Broadband reported capital expenditures of \$1.7 billion, of which \$695 million was related to the growth and support of advanced services and \$482 million was for network construction and upgrade.⁷⁹

4. Provision of Advanced Broadband Services

35. Advanced services continue to be deployed at a rapid pace. With most systems able to deliver digital video, and many systems able to deliver cable modem and/or cable telephone service, MSOs are beginning to commercially deploy other advanced service offerings such as video-on-demand ("VOD"), high-definition television ("HDTV"), and Internet protocol ("IP") telephony over cable systems.

36. *Digital Video Services.* Most major cable operators currently offer a selection of digitally-compressed video channels to analog subscribers on a "digital tier."⁸⁰ 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. Most cable operators offer two tiers of digitally compressed service; one that offers programming similar to programming available on the basic cable tier, and a second that offers programming similar to programming on the premium tier of service. This additional programming is offered in stand-alone packages, or in combination with PPV and VOD.⁸¹ Currently there are about 90 networks available for carriage on cable systems' digital tiers, offering a wide range of genres, including sports, music, movies, children's, family, and foreign-language programming.⁸²

37. As of year-end 2001, it was estimated that there were more than 15.2 million digital video subscribers industry-wide.⁸³ As of June 2002, there were an estimated 16.8 million digital video

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subscribers will be served by systems with broadband capacity of 750 MHz or greater. Charter Communications, Inc., *SEC Form 10-Q for the Quarter-Ended June 30, 2002*, at 28.

⁷⁶ *Id.* at 27.

⁷⁷ AOL Time Warner, Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at F-16.

⁷⁸ AT&T Broadband, *AT&T Group Earnings Commentary: Fourth Quarter 2001*, Jan. 30, 2002 at 12. As of December 31, 2001, 59% of AT&T's cable plant had been upgraded to a capacity of at least 750 MHz; *Applications for Consent to the Transfer of Control of Licenses, Comcast Corporation and AT&T Corp., Transferors, to AT&T Comcast Corporation, Transferee: Applications and Public Interest Statement ("AT&T-Comcast Merger Application")*, MB Docket No. 02-70, Feb. 28, 2002, at 18.

⁷⁹ AT&T Broadband, *AT&T Group Earnings Commentary: Second Quarter 2002*, July 23, 2002 at 11; AT&T Broadband, *AT&T Group Earnings Commentary: First Quarter 2002*, April 24, 2002 at 11.

⁸⁰ 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.

⁸¹ NCTA Comments at 29.

⁸² *Id.*

⁸³ *Id.*; see also NCTA, *What is Digital Cable?*, at <http://www.ncta.com>; See also Kagan World Media, *Broadband Cable Financial Databook*, July 2002, at 78.

subscribers.⁸⁴ The cable industry estimates that by 2006, the number of digital subscribers will increase nearly three-fold over 2002 levels, to more than 48 million digital cable subscribers.⁸⁵

38. As of year-end 2001, Cox reported approximately 1.4 million digital video subscribers, and more than 1.6 million subscribers as of June 2002.⁸⁶ As of June 2002, Comcast reported nearly two million digital video subscribers and expects to end 2002 with as many as 2.7 million digital video subscribers.⁸⁷ As of year-end 2001, AOL Time Warner had more than 3.3 million digital video subscribers.⁸⁸ By June 2002, AOL Time Warner had as many as 3.9 million subscribers.⁸⁹ As of year-end 2001, AT&T reported 3.5 million digital video subscribers.⁹⁰ As of June 2002, AT&T reported 3.9 million digital video subscribers.⁹¹ Charter Communications provided digital video service to approximately 2.1 million subscribers as of year-end 2001 and 2.4 million subscribers as of June 2002.⁹² Charter expects to have as many as 2.7 million digital video subscribers by year-end 2002.⁹³ Cablevision began providing digital video service commercially in September 2001.⁹⁴ By year-end 2001, Cablevision had 17,200 digital video subscribers, and by June 2002, Cablevision had 42,670 digital video subscribers.⁹⁵ Cablevision expects digital video to be available to as many as 3.4 million subscribers by year-end 2002.⁹⁶

39. *Video-on-Demand.* Cable operators continue to focus on video on demand ("VOD") service offerings and local content, with each of the top ten cable operators testing or offering a commercial VOD service.⁹⁷ Unlike pay-per-view services, VOD services allow the subscriber to select at any time

⁸⁴ NCTA, *What is Digital Cable?*, at <http://www.ncta.com>.

⁸⁵ *Id.*

⁸⁶ Cox Communications, Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 4; Cox Communications, Inc., *Cox Communications Announces Second Quarter Financial Results For 2002: Summary of Operating Statistics* (press release), July 31, 2002.

⁸⁷ Comcast Reply Comments at 2.

⁸⁸ AOL Time Warner, Inc., *AOL Time Warner Provides Update on 2002 With Consolidation of AOL Europe; Company Reports Preliminary Results for 2002* (press release), Jan. 7, 2002.

⁸⁹ AOL Time Warner, Inc., *SEC Form 10-Q for the Quarter Ended June 30, 2002*, at 12.

⁹⁰ AT&T Comcast, *Merger Proposal – Joint Proxy Statement/Prospectus*, May 14, 2002, at VII-28.

⁹¹ AT&T Broadband, *AT&T Group Earnings Commentary: Second Quarter 2002*, July 23, 2002, at 12.

⁹² Charter Communications, Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 13; Charter Communications, *SEC Form 10-Q for the Quarter-Ended June 30, 2002*, at 15.

⁹³ Charter Communications, Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 13.

⁹⁴ Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter 2001 Financial Results* (press release), Feb. 14, 2002.

⁹⁵ *Id.*; Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2002 Financial Results* (press release), Aug. 8, 2002.

⁹⁶ Cablevision Systems Corp., *Cablevision Systems Corporation Announces Fully-Funded Growth Plan* (press release), Aug. 8, 2002.

⁹⁷ Jennifer Lee, *Interactive TV is Finally Here, Sort Of*, NEW YORK TIMES, Apr. 4, 2002, at E1. See also Richard Bilotti, *Broadband Cable: Truth, Lies and Truck Rolls: Understanding Product Profitability*, Morgan Stanley, Oct. 4, 2002 ("Morgan Stanley Oct 4th Report"), at 63. Morgan Stanley notes that "most of the developments in the VOD space . . . have been content related rather than deployment specific" indicating that cable operators are focusing on ensuring they have saleable popular content to offer subscribers. *Id.* See also Kagan World Media, *Broadband Cable Financial Databook*, July 2002, at 79; Andrea Figler, *Movies Lead, All Others Follow*,

(continued....)

programming they wish to view from a large selection of titles and categories stored on a remote server.⁹⁸ VOD systems run on a server located in the cable operator's headend, which delivers programming as it is demanded by individual subscribers at virtually any time, with VCR-like controls such as pause, rewind, forward and stop, and for an extended period of time, usually 24 hours. Some operators are opting to offer VOD via the subscription model ("SVOD"), in which the subscriber pays one monthly fee for unlimited access to a library of pre-selected programming. By 2005, VOD revenues are projected to range between \$278 million and \$3 billion.⁹⁹

40. NCTA comments that "the battleground between cable and DBS" is moving into the VOD arena, but that cable companies have differentiated approaches to providing this service.¹⁰⁰ EchoStar agrees with NCTA's assessment regarding VOD, but states it cannot compete effectively with cable's VOD offerings because cable is able to cache content at servers throughout a franchise area. EchoStar states that DBS operators must rely on limited bandwidth on satellite frequencies, with on-demand programming available at staggered intervals throughout the day.¹⁰¹ Some cable MSOs report that VOD has contributed to increased demand for and reduced churn of digital services.¹⁰² Comcast states that its VOD deployments have provided consumers with increased control over their viewing choices and have helped drive demand for digital services.¹⁰³

41. Cox provides VOD in its Hampton Roads and San Diego markets, and announced the launch of the first advertiser-supported VOD channel in its San Diego market in August 2002.¹⁰⁴ By the end of 2002, Cox plans to have VOD capability deployed for 30% of homes passed.¹⁰⁵ Comcast reports that it has launched VOD in 15 markets covering over 3.2 million homes and expects to make VOD available to

(...continued from previous page)

CABLEWORLD, Oct. 28, 2002, at <http://www.kagan.com/archive/cableworld/2002/10/28/cwd02102806.shtml> (visited Oct. 29, 2002).

⁹⁸ 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 timeshifted 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. 29, 2002).

⁹⁹ See Emarketer, *Interactive TV: Reality & Opportunity* ("2002 Emarketer Study"), March 2002, at 135.

¹⁰⁰ NCTA Comments at 31.

¹⁰¹ EchoStar Reply Comments at 6.

¹⁰² See Matt Stump, *Cable Ops Touting VOD as Anti-Churn Weapon*, BROADBAND WEEK, Mar. 4, 2002, quoting a Cox executive: "VOD will drive digital penetration;" and a Charter executive: "In regions where we've launched VOD for over 18 months, we see [digital churn] diving well below four percent per month, compared to typical digital churn rates in the range of 6-8 percent." *Id.*

¹⁰³ Comcast Comments at 5; Comcast Reply Comments at 3. Comcast believes that, although VOD is thought of as a way to deliver movies to consumers for a fee, Comcast is increasingly focusing on delivering other VOD content, including games, distance learning, how-to programs, and foreign language programming, at no additional charge as a means of driving sales of digital video. *Id.* at 3-4.

¹⁰⁴ Cox Communications, Inc., *Cox Communications Announces Launch of First-Ever Advertising-Focused Video On Demand Channel* (press release), Aug. 20, 2002; NCTA Comments at 32. See Kagan World Media, *Broadband Cable Financial Databook*, July 2002, at 79;

¹⁰⁵ Staci Kramer, *Revenue Good, Churn Bad*, CABLEWORLD, Oct. 28, 2002. Cox does not yet offer SVOD to its customers. *Id.*

nearly 50% of its homes passed by year-end 2002.¹⁰⁶ Comcast charges customers \$3.95 for new releases on-demand and \$2.95 for library content, but it includes SVOD services at no additional charge for those subscribing to premium programming, such as HBO, Showtime and Starz.¹⁰⁷ Charter offers VOD in 12 markets and has stated it will launch nine additional markets by year-end 2002, building a VOD "footprint" of approximately 1.1 million customers, or 40% of its total digital base.¹⁰⁸ AOL Time Warner has launched VOD in 32 of its 34 divisions, covering at least eight of its markets.¹⁰⁹ In addition to offering HBO, Starz Encore, and Showtime SVOD services and HBO on Demand, AOL Time Warner offers free content from Scripps Networks, including HGTV, Food Network and the BBC.¹¹⁰ AT&T has launched VOD in four major markets, and has begun a trial in two of those markets to test StarzEncore and Showtime SVOD services.¹¹¹ Cablevision offers VOD over its iO digital service in select parts of its franchise area.¹¹² Approximately 26% of Cablevision's iO customers have signed up for at least one SVOD service.¹¹³ In September 2001, Cablevision launched a VOD service called Mag Rack, offering special interest video content in the form of "video magazines."¹¹⁴ Each selection from the "video magazine rack" provides in-depth information and expert advice in a specific field of interest.¹¹⁵ As of June 2002, Cablevision was offering 27 "video magazines," and it anticipates having between 35 and 40

¹⁰⁶ Comcast Reply Comments at 3; NCTA Comments at 31. Comcast has deployed Wink technology in systems totaling 1.5 million Comcast customer homes in Florida, Virginia, Maryland, and Delaware, which provides viewers with free interactive programs and advertisements. Comcast Reply Comments at 5. Comcast also has deployed Worldgate's ITV services in Huntsville and Tuscaloosa, Alabama, which includes a variety of content including updated weather forecasts, horoscopes, recipes, stock quotes, headline news stories, entertainment links, and sports scores. *Id.*

¹⁰⁷ Comcast Reply Comments at 3; NCTA Comments at 31; Staci Kramer, *The Stakes Just Got Higher*, CABLEWORLD, Oct. 28, 2002.

¹⁰⁸ Charter Communications, Inc., *SEC Form 10-K for the Year Ended December 31, 2001*, at 15; Staci Kramer, *Ready, Set, Launch*, CABLEWORLD, Oct. 28, 2002. Charter has approximately 250 titles on VOD and SVOD and plans to roll out Mag Rack in January 2003. Charter charges \$3.99 for new releases, \$2.99 for library content, and \$3.99 per month for SVOD.

¹⁰⁹ NCTA Comments at 32; Kagan World Media, *Broadband Cable Financial Databook*, July 2002, at 79; AOL Time Warner, Inc., *SEC Form 10-K for the Year Ended December 31, 2001*, at 10; Mavis Scanlon, *Kicking Into High Gear*, CABLEWORLD, Oct. 28, 2002. AOL Time Warner charges \$3.95 for new programming releases and \$1.95 for "library" content. The company also offers subscription VOD of HBO, Cinemax, Showtime and the Movie Channel catalogues for \$6.95 per month.

¹¹⁰ *Id.*

¹¹¹ AT&T Broadband, *AT&T Broadband Launches Trial of Subscription Video-On-Demand in Los Angeles* (press release), May 1, 2002; AT&T Broadband, *AT&T Broadband To Launches Video-On-Demand With DIVA* (press release), Oct. 3, 2000.

¹¹² Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2002 Financial Results* (press release), Aug. 8, 2002. Cablevision offers over 700 titles per month; 30 hours of children's programming and movies; Mag Rack, a collection of video magazines covering specific fields of interest; encores of cable network programming; wrestling and classic sports matches; and 300 hours of "ITV clips," including local news, movie trailers and TechTV stories. See Mavis Scanlon, *The Upside of Going Slow*, CABLEWORLD, Oct. 28, 2002. Cablevision charges \$4.95 per new release on-demand and \$2.95 for library titles; SVOD is \$4.95 per month and requires separate subscription to premium channels. *Id.*

¹¹³ *Id.*

¹¹⁴ Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2002 Financial Results* (press release), Aug. 8, 2002. Charter and Insight have also agreed to carry Cablevision's Mag Rack VOD service in several of their systems. CableFAXDaily, Sept. 4, 2002, at 1.

¹¹⁵ NCTA Comments at 32.

distributed by year-end 2002.¹¹⁶ Insight continues to build its VOD deployment in ten markets and now has 225,000 subscribers capable of buying VOD programming.¹¹⁷

42. **Digital Television ("DTV") and High-Definition Television ("HDTV").** During the past year, the amount of digital and HDTV programming offered by cable operators has increased. Cable operators are now offering high definition digital programming, which is delivered to subscribers with digital receivers for display in digital format and resolution. Several MSOs, including Comcast, AOL Time Warner, Cox, Charter, AT&T, Adelphia, Cablevision, Mediacom, Insight, and CableOne now offer HDTV on cable systems in selected markets.¹¹⁸ In addition, the top ten cable operators (representing more than 85% of subscribers nationwide) will offer to carry the signals of up to five digital broadcast stations or other programming networks that provide HDTV during at least 50% of their prime time schedule or a substantial portion of their broadcast week by January 1, 2003.¹¹⁹

43. Comcast offers HDTV service to more than 1.3 million subscribers.¹²⁰ In addition to providing access to high-definition broadcasts of ABC, NBC, CBS, HBO, and Showtime in selected areas, Comcast will also offer HDTV signals for certain local PBS stations and its own Comcast SportsNet.¹²¹ AOL Time Warner has launched HDTV in more than 40 markets including high-definition broadcasts of ABC, CBS, NBC, and PBS, as well as HBO and Showtime in certain areas.¹²² Cox offers HDTV services in two markets with seven additional market launches planned before year-end 2002.¹²³ Cox's initial lineup includes local ABC and PBS stations, as well as HBO HD, Showtime HD and Discovery HD Theater.¹²⁴ Charter has announced that it will provide HDTV programming from HBO and Showtime in several of its markets.¹²⁵

44. **Internet and High-Speed Data Services.** Dial-up Internet access is still the most widely-used mode of accessing the Internet. As of year-end 2001, approximately 80%-82% of all Internet households

¹¹⁶ Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2002 Financial Results* (press release), Aug. 8, 2002.

¹¹⁷ Shirley Brady, *Getting Back in the Game*, CABLEWORLD, Oct. 28, 2002. VOD access is available as part of Insight's Digital Gateway service. Insight charges \$3.99 for new releases, \$2.99 for library titles, and \$9.99 for a children's unlimited programming package.

¹¹⁸ NCTA Comments at 33-35. Linda Moss, *Ops' HD Query: Can We Levy Fee?*, MULTICHANNEL NEWS, Nov. 25, 2002, at 6.

¹¹⁹ See Letters from Michael K. Powell, Chairman, FCC, to The Honorable Ernest F. Hollings, Chairman, Committee on Commerce, Science and Transportation, U.S. Senate, and The Honorable W.J. "Billy" Tauzin, Chairman, Committee on Energy and Commerce, U.S. House of Representatives, Attachment (*Proposal for Voluntary Industry Actions to Speed the Digital Television Transaction*) (Apr. 4, 2002) ("*Voluntary DTV Plan*"); see also Letter from Robert Sachs, President NCTA, to Chairman Powell, May 1, 2002.

¹²⁰ Comcast Reply Comments at 4; Comcast Corp., *Comcast To Debut HDTV In Major Markets By End of 2002* (press release), Mar 14, 2002.

¹²¹ Comcast Corp., *Comcast Launches HDTV* (press release), Oct. 29, 2001; Comcast Corp., *Comcast To Debut HDTV In Major Markets By End of 2002* (press release), Mar 14, 2002; *AT&T-Comcast Merger Application*, at 10.

¹²² NCTA Comments at 33; AOL Time Warner, Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 10.

¹²³ Cox Communications, Inc., *Cox Communications Launches HDTV in Phoenix* (press release), Sept. 4, 2002.

¹²⁴ *Id.*

¹²⁵ Charter Communications, Inc., *Charter High Definition Service Debuts in Five Markets* (press release), May 29, 2002.

were accessing the Internet using dial-up modems.¹²⁶ It is projected that telephone dial-up will remain the principal means of accessing the Internet until about 2005-2006, when it is expected that less than 50% will use dial-up access, with the remaining accessing the Internet through broadband facilities.¹²⁷

45. Cable modem access is currently the primary means of accessing the Internet over broadband networks, although cable's share of the broadband Internet access market has decreased over the last several years.¹²⁸ DSL remains the most significant broadband competitor to cable modem service. As of year-end 2001, high-speed Internet access services provided over cable were available to more than 50 million homes, and there were between approximately 6.9 and 7.4 million subscribers, whereas there were between 3 and 3.3 million residential DSL subscribers.¹²⁹ At that same time there were about 200,000 subscribers to other broadband technologies, including satellite and wireless.¹³⁰

46. The Internet service providers ("ISPs") used in cable modem service are selected by the cable provider.¹³¹ Some cable operators offer only one ISP to customers in a given system,¹³² and others offer consumers a choice among multiple ISPs. AOL Time Warner currently carries Road Runner and the

¹²⁶ JP Morgan estimates that as of year-end 2001, 81.5% of Internet households used dial-up connections. Morgan Stanley estimates that as of year-end 2001, 80% of Internet households used dial-up connections. Spencer Wang and John Blackledge, *Media Markets: Back to Basics*, JP Morgan Securities, Aug. 19, 2002 ("JP Morgan Aug. 19th Report"), at 155; Richard Bilotti, Benjamin Swinburne, Megan Lynch, and Scott Babka, *NUTS! The Last One Standing Wins*, Morgan Stanley, July 10, 2002 ("Morgan Stanley July 10th Report"), at 65.

¹²⁷ JP Morgan estimates that as of year-end 2005, 44% of Internet households will use dial-up connections, while 55.5% will use broadband connections. Morgan Stanley estimates that as of year-end 2006, 48% of Internet households will still use dial-up connections while 52% will use broadband connections. *Id.* 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.

¹²⁸ *See* Morgan Stanley Oct 4th Report, at 46-7. Cable's share of the broadband market remained relatively stable between year-end 2001 and June 2002, and some analysts expect cable's share will increase slightly at year-end 2002, though it is expected to remain over ten percentage points below 1999 levels. *Id.*

¹²⁹ Based on information from five top cable operators, Bear Stearns estimates more than 50 million marketable homes as of year-end 2001. Cable modem service is likely available to many more homes than that. Raymond Lee Katz, Gloria Radeff, and Bryan Goldberg, *Cable TV & Broadband*, Bear Stearns, May 2002 ("Bear Stearns May Report"), at 14. JP Morgan estimates that as of year-end 2001, there were 6.9 million cable modem subscribers. Bear Stearns estimates that as of year-end 2001, there were more than 7.35 million cable modem subscribers, and Morgan Stanley estimates that as of year-end 2001, there were more than 7.38 million cable modem subscribers. Bear Stearns May Report, at 14; JP Morgan Aug. 19th Report at 155; Morgan Stanley July 10th Report, at 65. Bear Stearns estimates that as of year-end 2001, there were 3 million residential DSL subscribers, and Morgan Stanley estimates that as of year-end 2001, there were more than 3.3 million residential DSL subscribers. Bear Stearns May Report, at 14; Morgan Stanley July 10th Report, at 65.

¹³⁰ JP Morgan estimates that as of year-end 2001, there were 200,000 subscribers to satellite and wireless broadband technologies. Bear Stearns estimates that as of year-end 2001, there were 225,000 subscribers to satellite and wireless broadband technologies. Bear Stearns May Report, at 14; JP Morgan Aug. 19th Report, at 155.

¹³¹ Many cable providers offer cable modem service through proprietary ISPs. *See 2001 Report*, 17 FCC Rcd 1266-67; *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*, CS Docket No. 02-52, GN Docket No. 00-185, Declaratory Ruling and Notice of Proposed Rulemaking ("*High-Speed Access Declaratory Ruling and NPRM*"), 17 FCC Rcd 4798 (2002).

¹³² For example, Cablevision offers high-speed Internet access service under the brand Optimum Online only, and Charter offers high-speed Internet access services under the brand name Charter Pipeline only. Cox offers high-speed Internet access services under the brands Cox Express and Cox High Speed Internet, however, each system offers only one ISP to its subscribers.

AOL Internet service, as well several unaffiliated national or regional ISPs, including Earthlink.¹³³ Comcast, AT&T, and AT&T Comcast (Comcast) have entered into an agreement with Microsoft,¹³⁴ which provides that, for a specified period of time, if AT&T Comcast offers a high-speed Internet service agreement to any third party on any of its cable systems, AT&T Comcast will be obligated to offer an Internet service agreement on non-discriminatory terms with respect to the same cable systems to Microsoft's ISP, The Microsoft Network ("MSN").¹³⁵ AT&T and Comcast have also agreed to carry the AOL ISP service on the combined AT&T and Comcast systems (Comcast), serving up to one-third of the MSO's subscribers.¹³⁶ AT&T has already entered into contracts with several national or regional unaffiliated ISPs including EarthLink, and Comcast has entered into a contract with unaffiliated ISP, United Online.¹³⁷

47. As of year-end 2001, Cox had approximately 884,000 high-speed Internet access subscribers, and by June 2002, had approximately 1.1 million subscribers.¹³⁸ Analysts forecast that Cox could have as many as 1.3 million high-speed Internet access subscribers by the end of 2002.¹³⁹ As of year-end 2001, Comcast had 948,000 high-speed Internet access subscribers, and by June 2002, Comcast had approximately 1.2 million high-speed Internet access subscribers.¹⁴⁰ As of year-end 2001, AT&T had approximately 1.5 million high-speed Internet access subscribers, and as of June 2002 AT&T had approximately 1.8 million subscribers.¹⁴¹ As of year-end 2001, Cablevision had 506,675 high-speed Internet access subscribers.¹⁴² By June 2002, Cablevision had 610,505 subscribers.¹⁴³ As of year-end 2001, Charter had 607,700 high-speed Internet access subscribers and it expects that by year-end 2002 it will have as many as 1.25 million high-speed Internet access subscribers.¹⁴⁴ As of June 2002, Charter had

¹³³ AOL Time Warner Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 10-11.

¹³⁴ See *AT&T-Comcast Merger Order*, fn. 54 *supra* at n.370.

¹³⁵ See *id.* This obligation applies for a period of five years following the spin-off of AT&T Broadband. *AT&T-Comcast Merger Application*, at 8. AT&T, Comcast, and Microsoft also agreed to a term sheet providing for a trial of an ITV platform including set-top box middleware. *Id.* at 8.

¹³⁶ In connection with the TWE Restructuring Agreement, AT&T and Comcast will enter into a three-year non-exclusive agreement with AOL Time Warner under which AOL high-speed Internet access service would be made available on AT&T Comcast cable systems. 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.

¹³⁷ Prior to its merger with Comcast, AT&T entered into third-party ISP agreements with Galaxy Internet Services, Earthlink, Net1Plus, and Internet Central. See Letter from James R. Coltharp, Senior Director, Public Policy, Comcast Corp. and Betsy J. Brady, Vice President, Federal Government Affairs, AT&T Corp., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 02-70 (Nov. 6, 2002), at 1. See also Letter from A. Renee Callahan, Lawler, Metzger & Milkman, LLC, to Marlene H. Dortch, Secretary, FCC, MB Docket No. 02-70 (July 2, 2002), at 19-20 (responding to Document and Information Request by the Chief, Industry Analysis Division, Media Bureau, FCC, (June 11, 2002)).

¹³⁸ Cox Communications, Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 5; Cox Communications, Inc., *Cox Communications Summary of Operating Statistics*, at 13.

¹³⁹ Bear Stearns May Report, at 14.

¹⁴⁰ Comcast Reply Comments at 5; *AT&T-Comcast Merger Application*, at 12.

¹⁴¹ AT&T Broadband, *AT&T Group Earnings Commentary: Fourth Quarter 2001*, Jan. 30, 2002 at 14; AT&T Broadband, *AT&T Group Earnings Commentary: Second Quarter 2002*, July 23, 2002, at 12.

¹⁴² Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter 2001 Financial Results for Cablevision NY Group and Rainbow Media* (press release), Feb. 14, 2002.

¹⁴³ Cablevision Systems Corp., *Cablevision Systems Corporation Reports Second Quarter 2002 Financial Results for Cablevision NY Group and Rainbow Media* (press release), Aug. 8, 2002.

¹⁴⁴ Charter Communications, Inc., *SEC Form 10-K for the Year-Ended December 31, 2001*, at 14.

905,500 high-speed Internet access subscribers.¹⁴⁵ As of June 2002, AOL Time Warner had 2.5 million subscribers to its cable modem service.¹⁴⁶

48. As we have reported in the past, a few cable operators offer Internet access services delivered through a television receiver rather than a personal computer.¹⁴⁷ Many of these products are available on a stand-alone basis and can be used independently of a cable television subscription. Many, however, are co-marketed through the cable television provider.¹⁴⁸ Nationwide providers of television-based Internet access services include Microsoft, which provides MSN-TV (formerly WebTV), Worldgate, and America Online, which provides AOLTV.¹⁴⁹

49. *Telephone Services Offered by Cable Operators.* Since our last report, several cable operators have begun to test IP telephony in addition to the traditionally-deployed circuit-switched telephony.¹⁵⁰ Most cable operators deploying IP telephony, however, are electing to deploy telephony as second-line service. Second-line service is not self-powered and thus does not guarantee that the telephone will function in the event of a power failure. In some cases second-line service is not connected to the customer's existing telephone wiring. Instead, customers are required to plug their telephone units into their cable modems and run their own wiring or elect to use wireless handset units in their homes.

50. Cox and AT&T continue to deploy circuit-switched cable telephony, and others, such as Cablevision, Comcast, and Charter offer circuit-switched cable telephony where it has already been deployed. Several MSOs, including AT&T, AOL Time Warner, Cox, Comcast, and Charter, are currently testing, or have commercially deployed IP telephony. As of June 2002, cable operators served approximately 2.1 million local residential IP and circuit-switched telephone customers.¹⁵¹

51. AT&T and Cox remain the leaders in the provision of primary-line, circuit-switched cable telephony. As of year-end 2001, Cox provided residential, facilities-based, circuit-switched cable telephony services in nine markets to nearly 500,000 subscribers nationwide.¹⁵² As of June 2002, Cox had 578,321 subscribers.¹⁵³ In addition, Cox is running an IP telephony trial in its Oklahoma City,

¹⁴⁵ Charter Communications, Inc., *SEC Form 10-Q for the Quarter Ended June 30, 2002*, at 16.

¹⁴⁶ AOL Time Warner, Inc., *SEC Form 10-Q for the Quarter Ended June 30, 2002*, at 12.

¹⁴⁷ *2001 Report*, 17 FCC Rcd at 1269.

¹⁴⁸ For example, as of year-end 2001, Charter offered television-based Internet access using WorldGate to approximately 557,000 homes with over 9,000 subscribers, and offered advanced interactive television services using Diego to more than 558,000 homes. Charter Communications, Inc., *SEC Form 10-K for the Year Ended December 31, 2001*, at 15; Charter Communications, Inc., *Digeo and Moxi Merge* (press release), Mar. 29, 2002.

¹⁴⁹ For an explanation of how the WebTV and Worldgate services operate, see *1998 Report*, 13 FCC Rcd at 24315-6.

¹⁵⁰ 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. See *2001 Report*, 17 FCC Rcd at 1269.

¹⁵¹ NCTA, *Telephone Services*, at <http://www.ncta.com>.

¹⁵² Cox Communications, Inc., *Cox Communications Announces Fourth Quarter Financial Results for 2001* (press release), Feb. 12, 2002; Cox Communications, Inc., *Cox Timeline for Telephony* (news release), Apr. 16, 2002.

¹⁵³ Cox Communications, Inc., *Cox Communications Announces Second Quarter Financial Results for 2002* (press release), July 31, 2002.

Oklahoma system.¹⁵⁴ AT&T offers its residential, facilities-based, circuit-switched telephony product in 16 markets, and as of June 2002, had over 1.2 million subscribers.¹⁵⁵ AT&T has also been pursuing IP telephony solutions. As of July 2002, AT&T was conducting a hybrid circuit-switched-IP telephony trial in its Boulder, Colorado system.¹⁵⁶

52. Other MSOs are also providing telephony in certain service areas. For example, Comcast provides primary-line circuit-switched telephony services to more than 40,000 subscribers in several of its systems, continuing telephone operations associated with certain cable systems it acquired in the last several years.¹⁵⁷ In June 2002, Comcast announced that it has begun to install equipment for the initial deployment of residential, primary-line IP telephony service in the Philadelphia area, with plans to begin service in the second quarter of 2003.¹⁵⁸ Comcast has also announced its intention to deploy IP telephony in Detroit, though in October 2002, Comcast said that after consummation of its merger with AT&T, it plans to temporarily put any additional cable telephony plans on hold so that it can focus on rebuilding AT&T's basic cable subscribership.¹⁵⁹ As a result of its acquisition of certain AT&T cable systems, Charter Communications provides circuit-switched cable telephony to more than 17,600 subscribers.¹⁶⁰ Charter has been testing IP telephony in several field trials.¹⁶¹ AOL Time Warner plans to launch IP telephony in 2003.¹⁶² Cablevision offers limited facilities-based, residential circuit-switched telephony in New York to approximately 13,400 subscribers.¹⁶³

B. Direct-To-Home Satellite Services

1. Direct Broadcast Satellite Services

53. DBS service is a nationally distributed subscription video service that delivers video and audio programming via satellite to a small parabolic "dish" antenna located at the viewer's home. To date, the Commission has licensed four companies to provide DBS service: DirecTV, EchoStar (marketed as the DISH Network), Dominion Video Satellite, Inc. (marketed as Sky Angel) and Cablevision's

¹⁵⁴ Morgan Stanley July 10th Report, at 69.

¹⁵⁵ AT&T Comments at 16-17.

¹⁵⁶ Morgan Stanley July 10th Report, at 69.

¹⁵⁷ Comcast Corp., *Comcast Announces Plans For Residential Primary-Line IP Phone Service In Portion Of Philadelphia Market* (press release), June 27, 2002.

¹⁵⁸ *Id.*

¹⁵⁹ *AT&T-Comcast Merger Application*, at 38; In Detroit, Comcast is implementing a hybrid IP-circuit switched approach, In this approach, IP technology is used in the connection between the customer's home and the headend, after which the signal is converted and processed through Comcast's existing switch. See Letter from James L. Casserly, Mintz, Levin, Cohen, Ferris, Glovsky and Popeo, P.C., to Marlene H. Dortch, Secretary, FCC, MB Docket No. 02-70 (Aug. 20, 2002). David Lieberman, *Comcast Plans Focus on Cable Subscriptions*, USA TODAY, Oct. 29, 2002, at B3; Peter Thai Larsen, *Comcast Pledges to Stop "Churn,"* FINANCIAL TIMES, Oct. 29, 2002, at 18.

¹⁶⁰ Charter Communications, Inc., *SEC Form 10-Q for the Quarter-Ended June 30, 2002*, at 37.

¹⁶¹ Charter Communications, Inc., *Charter Communications and High Speed Access Corp. Announce Trial of True IP Switched Local Voice Service Over Cable* (press release), Dec. 14, 1999.

¹⁶² Peter Grant, *More Consumers Answer Cable's Call on Phone Service*, WALL STREET JOURNAL, Sept. 5, 2002, at B1.

¹⁶³ Cablevision Systems Corp., *Cablevision Systems Corporation Reports Fourth Quarter 2001 Financial Results for Cablevision NY Group and Rainbow Media Group* (press release), Feb. 14, 2002.

Rainbow DBS.¹⁶⁴ Three of these companies – DirecTV, EchoStar and Dominion -- currently provide service.¹⁶⁵

54. Rainbow DBS is in the process of constructing a DBS satellite, "Rainbow 1 DBS," from which it expects to initiate service in December 2003.¹⁶⁶ Rainbow expects to deploy a spot-beam satellite and eventually use high-compression MPEG-4 technology to increase the amount of programming that can be distributed.¹⁶⁷ Rainbow states that its 11 allocated channels¹⁶⁸ can be used to deploy 21 spot beams capable of reaching 143 DMAs,¹⁶⁹ including 76 of the top 100 and 67 of the remaining 110.¹⁷⁰

55. A potential new U.S. entrant, Compass Systems, Inc., a company 100% owned by Northpoint Technologies, Ltd., has filed an application for a construction permit for a DBS system and

¹⁶⁴ R/L DBS Company, L.L.C. ("Rainbow DBS") is a 100% wholly-owned subsidiary of Rainbow Media Holdings, Inc., the programming subsidiary of Cablevision Systems Corporation, and holds the license for 11 channels at the 61.5° W.L. orbital location. In March 2002, Rainbow Media Holdings, Inc. acquired Loral Space and Communications, Ltd.'s 50% interest in R/L DBS Company, LLC. This purchase increased Rainbow Media Holdings' ownership of R/L DBS to 100%. See Cablevision Systems Corp., *SEC Form 10-Q for the Quarterly Period Ended June 30, 2002*, at I-6, Note 6. On December 28, 2000, the Commission granted a 36-month extension of time to R/L DBS to construct and launch a satellite. See *Petition of R/L DBS Company, L.L.C. For Extension of its Direct Broadcast Satellite Construction Permit*, 16 FCC Rcd 9, 10-11 (2001).

¹⁶⁵ Dominion is the licensee of eight channels at 61.5° W.L. orbital location. Dominion was issued a construction permit in 1982. 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). See also <http://www.skyangel.com>. Dominion plans to launch two satellites in the 2004-2005 timeframe. See *The Carmel Group, 2002 DBS North America Databook ("2002 Carmel Report")*, at 247.

¹⁶⁶ See Cablevision Systems Corp., *SEC Form 10-K for the Year Ended December 31, 2001*, at 1-38-39. In December 2000, the International Bureau granted an extension to R/L DBS' construction permit, requiring it to commence service offerings no later than December 29, 2003. See *Petition of R/L DBS Company, LLC for Extension of its Direct Broadcast Satellite Construction Permit*, 16 FCC Rcd 9 (IB 2000).

¹⁶⁷ See Letter from Howard J. Symons, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. on behalf of Cablevision and R/L DBS Co. to Marlene H. Dortch, Secretary, FCC, Attachment at 3-7 (Sept. 18, 2002).

¹⁶⁸ On March 26, 2002, Rainbow filed an application requesting authorization to use channels 23 and 24 at 61.5° W.L. See *Application of R/L DBS Company, LLC to Modify Existing DBS Authorization to Add Channels 23 and 24 at 61.5 W.L.* Currently, these channels are unassigned, but used by EchoStar pursuant to a grant of Special Temporary Authority ("STA"). See also *Direct Broadcasting Satellite Corporation Application for Special Temporary Authority to Operate a Direct Broadcast Satellite over Channels 1-21 (odd) and 23-32 (odd and even) at 61.5 W.L.*, 13 FCC Rcd 6392 (IB 1998); *Direct Broadcasting Satellite Corporation Application Authority of a Direct Broadcast Satellite, Application for Modification and Request for Special Temporary Authority to Test*, 13 FCC Rcd 10080 (IB 1998).

¹⁶⁹ Designated Market Areas ("DMAs") are used by Nielsen Media Research to identify TV stations whose broadcast signals reach a specific area. A DMA consists of all counties whose largest viewing share is given to stations of that same market area. Non-overlapping DMAs cover the entire contiguous 48 states, Hawaii, and parts of Alaska. There are currently 210 DMAs throughout the United States. See <http://www.nielsenmedia.com/FAQ/index.html>.

¹⁷⁰ *Id.*

for authorization for a terrestrial platform in the DBS frequencies ("Southpoint Application").¹⁷¹ The Southpoint Application has four parts: (1) an application for authority to construct a DBS system; (2) a request for the Commission to exercise its discretion to grant immediately an "interim assignment" of unassigned DBS channels at each of the U.S. DBS positions of 166° W.L. and 157° W.L. for the applicant's proposed DBS satellites;¹⁷² (3) a request for immediate authorization of a multichannel video and broadband service through an "integrated terrestrial platform" located in the United States; and (4) a discussion of future plans for providing DBS service to the United States, Canada, and Mexico and for providing fixed satellite service to other nations.

56. **Foreign-licensed Satellites Seeking Access to the U.S. Market for DBS and DTH.** The Commission has several requests from foreign-licensed satellite operators seeking access to the U.S. market to provide DBS and DTH services.¹⁷³ On April 25, 2002, SES Americom filed an application to provide service in the United States using a satellite licensed by Gibraltar at the 105.5° W.L. orbital location.¹⁷⁴ SES Americom states that its service, Americom2Home, will offer a platform on which a variety of content providers can lease capacity to offer programming directly to consumers, as opposed to directly offering retail services to consumers.¹⁷⁵

57. There are also two pending requests to use a Canadian-licensed satellite to provide DBS and DTH services in the United States. The first is Digital Broadband Applications Corp. ("DBAC"). DBAC filed its application on January 8, 2002, for authority to operate earth stations to communicate with the Canadian-licensed DBS space stations Nimiq at 82° W.L. orbital location and Nimiq 2 at 91° W.L. orbital location. DBAC proposes to offer interactive two-way broadband video and data services in the United States. The second applicant is WSNet Holdings, Inc. ("WSNet"), which filed its application on November 21, 2001. WSNet requests authority to operate earth stations that will communicate with both Nimiq satellites to provide DBS in the United States.

58. **Subscribership.** DBS has become the largest competitor to cable in the MVPD market. DBS subscribership grew by almost 13% from approximately 16.1 million subscribers as of June 30,

¹⁷¹ See Application of Compass Systems, Inc. for Authority to Construct an International Direct Broadcast Satellite System (filed Mar. 20, 2002).

¹⁷² The 157° W.L. orbital position is a non-full continental United States ("CONUS") slot with 32 unassigned frequencies. The 166° W.L. orbital location is a non-full CONUS slot and has 32 frequencies, eight of which have been assigned to R/L DBS. The 101° W.L., 110° W.L. and 119° W.L. orbital locations have 32 frequencies each and are the only slots with what the Commission considers full CONUS coverage. Currently, EchoStar and DirecTV have been assigned all full CONUS frequencies. EchoStar is assigned 29 frequencies at 110° W.L. and 21 frequencies at 119° W.L. DirecTV is assigned 32 frequencies at 101° W.L., three frequencies at 110° W.L., and 11 frequencies at 119° W.L.

¹⁷³ These requests will be evaluated under the framework established in *DISCO II*. See *Amendment of the Commission's Regulatory Policies to Allow Non-U.S. Licensed Satellites Providing Domestic and International Service in the United States*, 12 FCC Rcd 24094 (1997) (DISCO II). Because the United States exempted DBS from its commitment in the World Trade Organization Basic Telecommunications Agreement, this evaluation includes an analysis of the effective competitive opportunities U.S. satellite operators have in the country licensing the foreign satellite (the "ECO-SAT test"), in addition to a technical/interference analysis. The United States does not require the foreign DBS satellite to acquire a separate and duplicative U.S. license for the satellite. The Commission requires foreign-licensed companies to file for authority to "land" their signals by seeking an earth station license or to file a petition for declaratory ruling to provide service to earth stations in the United States.

¹⁷⁴ File No. SAT-PDR-20020425-00071.

¹⁷⁵ SES Americom Reply Comments at 2. See also SES Americom, Inc., *SES Americom Files FCC Petition for New Satellite Television and Internet Platform* (press release), Apr. 25, 2002. According to SES, the Americom2Home system could be operational as early as 2004. *Id.*

2001 to approximately 18.2 million subscribers as of June 31, 2002.¹⁷⁶ EchoStar and DirecTV subscribers comprise 20.3% of total MVPD households.¹⁷⁷ Analysts believe that DBS industry growth is attributed to reductions in the price of hardware, low- or no-cost installation promotions, and aggressive program marketing.¹⁷⁸ Analysts are projecting a consolidated annual growth rate for the DBS industry of 7–8% from 2002 to 2008.¹⁷⁹

59. DirecTV is the nation's leading DBS operator, and third largest MVPD provider, reporting approximately 10.7 million subscribers as of the end of June 2002, an increase of just over 10% from the 9.6 million subscribers reported as of June 30, 2001.¹⁸⁰ EchoStar is the second largest DBS provider, and sixth largest MVPD overall, with 7.6 million subscribers as of July 30, 2002.¹⁸¹ Dominion's Sky Angel service is a self-described Christian and family-oriented DBS service, offering 20 video and 16 radio channels for \$9 a month.¹⁸² Although Dominion's transponders are currently located on an EchoStar satellite, Sky Angel subscribers must use a separate dish antenna to receive DISH Network programming.¹⁸³ Sky Angel does not report its subscriber numbers on an annualized basis, but one analyst estimates that Sky Angel is distributed to over one million subscribers.¹⁸⁴

60. According to one study, in overall customer satisfaction performance, DirecTV ranked highest among 14 major providers of satellite and cable TV services nationwide, achieving a score 18 index points higher than the cable TV service average.¹⁸⁵ EchoStar ranked second in the study.¹⁸⁶ According to the SBCA, 57% of DBS households have subscribed to cable previously, an increase from

¹⁷⁶ SkyReport, *National DTH Counts July 2001 to July 2002*, at http://www.skyreport.com/dth_counts.shtml. See also SBCA Reply Comments at 6, Table 1.

¹⁷⁷ See Appendix B, Table B-1 *infra*.

¹⁷⁸ Kagan World Media, Inc., *The State of DBS 2002* ("DBS Databook"), Nov. 2001, at 13.

¹⁷⁹ See 2002 Carmel Report at 8. See also Douglas Shapiro, Michael Savner, and Jeffrey Toohig, *Equity Research: Initiating Coverage of DBS Sector*, Banc of America Securities, Sept. 19, 2002, at 3, Figure 1.

¹⁸⁰ DirecTV Comments at 11. DirecTV has entered into an exclusive distribution relationship in certain territories with the National Rural Telecommunications Cooperative ("NRTC") which acquires and supports subscribers. The NRTC, its partner Pegasus, and several smaller resellers are reported to account for approximately 1.75 million subscribers of the 10.74 million total reported by DirecTV. See Hughes Electronics Corporation, *Hughes Second Quarter 2002 Results Driven by Strong DirecTV U.S. Financial Performance* (press release), July 15, 2002. DirecTV states that, compared to cable subscribers, DBS subscribers are more likely to live in single family homes, and more likely to live in rural areas. DirecTV Comments at 12. DirecTV states that approximately 55% of DirecTV's subscribers (including those of distributor NRTC) live in larger urban areas, defined by A.C. Nielsen as "A" counties (those counties in the 21 largest metropolitan areas) and "B" counties (all counties with more than 85,000 households under 1990 Census that are not included as "A" counties), and 45% live in smaller, rural counties. *Id.* at 12–14.

¹⁸¹ SkyReport, *National DTH Counts July 2001 to July 2002*, at http://www.skyreport.com/dth_counts.shtml.

¹⁸² Sky Angel, at <http://www.skyangel.com/HTML%20Site/Body%20Pages/FAQ/faq.htm>.

¹⁸³ *Id.*

¹⁸⁴ 2002 Carmel Report at 245.

¹⁸⁵ J.D. Power and Associates, *J.D. Power and Associates Reports: Satellite TV Grows in Consumer Popularity, Cable Service Sees Slight Decline* (press release), Sept. 5, 2002. DirecTV ranked highest in all six categories studied: cost of service, credibility/billing, program offerings, equipment and service capabilities, customer service, and reception quality.

¹⁸⁶ *Id.*

48% in 2000.¹⁸⁷ Three percent of DBS households also concurrently subscribe to cable, the most common reason being to have access to local broadcast stations that are not offered via satellite.¹⁸⁸

61. *Availability of Local Broadcast Stations.* DBS operators continue to expand their delivery of local broadcast television stations in their local markets ("local-into-local service").¹⁸⁹ As of December 2002, DirecTV offered subscribers in 51 DMAs a \$5.99 per month package of local broadcast stations including commercial and noncommercial stations.¹⁹⁰ As of December 2002, EchoStar also offers a similar package of commercial and noncommercial broadcast stations for \$5.99 per month in 52 DMAs.¹⁹¹ EchoStar and DirecTV also make available to customers who are not within a DMA where

¹⁸⁷ SBCA Comments at 6.

¹⁸⁸ *Id.*

¹⁸⁹ 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 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, effective January 1, 2002, it must carry all the local stations in the DMA that request carriage pursuant to the Commission's rules. See 47 C.F.R. §76.66. See *Implementation of the Satellite Home Viewer Improvement Act 1999: Broadcast Signal Carriage Issues, Retransmission Consent Issues*, 16 FCC Rcd 1918 (2000); *Implementation of the Satellite Home Viewer Improvement Act of 1999: Broadcast Signal Carriage Issues*, 16 FCC Rcd 16544 (2001); *Implementation of the Satellite Home Viewer Improvement Act of 1999: Retransmission Consent Issues: Good Faith Negotiation and Exclusivity*, 16 FCC Rcd 15599 (2001). The satellite industry challenged and sought review of the Commission's Order implementing the statute and appealed a June 19, 2001, judgment of the United States District Court for the Eastern District of Virginia, which granted the government's motion to dismiss their complaint challenging the SHVIA. On December 7, 2001, the United States Court of Appeals for the Fourth Circuit denied the petitions for review and affirmed the District Court's opinion. See *DirecTV, EchoStar, SBCA v. FCC & USA*, No. 01-1151 (Fourth Circuit). See also *Satellite Broadcasting and Communications Association v. FCC*, No. 01-1151 et al (4th Cir. 2001). The Supreme Court declined to review the 4th Circuit's opinion. See *Satellite Broadcasting Communications Assoc v. FCC*, 275 F.3d 337 (4th Cir. 2001), *cert. denied*, 122 S. Ct. 2588 (2002).

¹⁹⁰ See SkyReport, *Local TV Channels Available by Satellite: Available on DirecTV and EchoStar's DISH Network*, at <http://www.skyreport.com/local.shtm> (visited Oct. 4, 2002). DirecTV consumers in Hartford, Connecticut; Las Vegas, Nevada; Providence, Rhode Island; Buffalo, New York; Grand Rapids, Michigan; Knoxville, Tennessee; Norfolk, Virginia; Oklahoma City, Oklahoma; New Orleans, Louisiana; and Jacksonville, Florida markets need a special set-top receiver and an 18 x 24-inch, oval shaped satellite dish to access local channels from DirecTV's satellite at the 119° W.L. orbital location. SBCA Comments at 6; DirecTV, Inc., *Local Channels Availability*, at <http://www.directv.com/DTVAPP/LocalChannelsAction.do>.

¹⁹¹ See DISH Network, Inc., at <http://www.dishnetwork.com/content/programming/locals/index.shtml>. EchoStar uses its CONUS satellites to deliver signals of local commercial and noncommercial broadcast stations to subscribers. Any remaining stations in a market not carried on CONUS satellites are carried on EchoStar's secondary satellites, operating from 61.5° W.L. and 148° W.L. orbital locations. In order to receive these local stations from EchoStar's secondary satellites, subscribers are required to obtain and install additional equipment, including a second dish antenna. As of August 23, 2002, EchoStar reported that it had received 116,348 second dish requests from subscribers, 100,880 of which have been installed, with 15,468 requests outstanding. See EchoStar's Local Station Carriage Compliance Plan: 150 Day Report, CSR-5865-Z (filed Sept. 3, 2002). See also *National Association of Broadcasters and Association of Local Television Stations; Request for Modification or Clarification of Broadcast Carriage Rules for Satellite Carriers ("Two-Dish Order")*, 17 FCC Rcd 6065, 6081, 6084 (MB 2002), *recon. pending*. EchoStar has launched two satellites, EchoStar VII and EchoStar VIII, both of which it reports have allowed it to transition some markets from a two-dish to a single-dish local-into-local service offering and to introduce several new markets with a single dish solution. The lawfulness of EchoStar's two-dish approach is on review. See Applications for Review, *Two-Dish Order*, filed by WLNY-TV Inc. and Golden Orange Broadcasting Co. (May 3, 2002), Association of Public Television Stations and the Public Broadcasting Service (May 6, 2002), and Paxson Communications Corporation (May 6, 2002).

EchoStar carries local broadcast stations a Distant Broadcast Network package including ABC, CBS, NBC, FOX and PBS.¹⁹² Of the 210 DMAs, local-into-local service is offered by at least one DBS operator in 62 markets. In 41 of those markets, local-into-local service is offered by both EchoStar and DirecTV. SBCA claims that, taken together, EchoStar and DirecTV offer local-into-local service to approximately 67% of U.S. television households.¹⁹³ EchoStar states that the addition of local channels has made DBS more competitive with incumbent cable providers and has led to an increase in DBS subscribership and a restraint on cable prices.¹⁹⁴ DirecTV reports that, as of June 30, 2002, over 60% of all residential customers took local programming packages (where available), an increase of 13 percentage points from the 47% it reported last year.¹⁹⁵

62. ***EchoStar-Hughes Merger.*** On December 3, 2001, the Commission received the application (the "Application")¹⁹⁶ of EchoStar, General Motors Corporation ("GM"), and Hughes Electronics Corporation ("Hughes") (collectively, the "Applicants") for consent to transfer control of various Commission authorizations, including DBS and fixed satellite space station authorizations, earth station authorizations, and other related authorizations held by their wholly- or majority-owned subsidiaries to EchoStar ("New EchoStar"). The proposed transaction involved the split-off of Hughes from GM, followed by the merger of the Hughes and EchoStar companies. The proposed merged entity, New EchoStar, would have a new ownership structure and would have continued to provide DBS subscription television service under the DirecTV brand name. The proposed merger would have combined operations of the two major DBS providers in the United States – EchoStar and Hughes' DirecTV – into a single entity.¹⁹⁷

63. On October 9, 2002, the Commission declined to approve the transfer of licenses from EchoStar and Hughes Electronics to New EchoStar and designated the application for a full evidentiary hearing before an Administrative Law Judge.¹⁹⁸ The Commission found that EchoStar and Hughes failed

¹⁹² See DISH Network, Inc., *Distant Broadcast Networks*, <http://www.dishnetwork.com/content/programming/locals/index.shtml> (visited Oct. 4, 2002). See DirecTV, Inc., at <http://www.directv.com/DTVAPP/learn/NonLocalFeed.jsp>.

¹⁹³ SBCA Comments at 6.

¹⁹⁴ EchoStar Comments at 5.

¹⁹⁵ DirecTV Comments at 13. See also *2001 Report*, 17 FCC Rcd at 1273-74.

¹⁹⁶ See *Consolidated Application of EchoStar Communications Corporation, General Motors Corporation, Hughes Electronics Corporation, Transferors, and EchoStar Communications Corporation, Transferee, for Authority to Transfer Control*, Dec. 3, 2001 ("December 2001 Filing"); Letters to William F. Caton, Acting Secretary, Federal Communications Commission from Pantelis Michalopoulos, Counsel for EchoStar and Gary Epstein, Counsel for Hughes providing information pursuant to Section 1.65 of Commission Rules, filed Dec. 18, 2001 and Feb. 21, 2002 ("December 2001 Amendment Letter" and "February 2002 Amendment Letter"). The term, "Application," includes the *December 2001 Filing*, *December 2001 Amendment Letter*, and *February 2002 Amendment Letter*.

¹⁹⁷ EchoStar and Hughes also submitted a joint application requesting authority to launch and operate NEW ECHOSTAR 1, a direct broadcast satellite that would be located at the 110° W.L. orbital location (the "Satellite Application"). See *EchoStar Satellite Corporation and Hughes Electronic Corporation, Application for Authority to Launch and Operate NEW ECHOSTAR 1 (USABBS-16)*, S2435, File No. SAT-LOA-20020225-00023 (Feb. 25, 2002); Letter to William F. Caton, Acting Secretary, Federal Communications Commission from Pantelis Michalopoulos, Counsel for EchoStar, and Gary Epstein, Counsel for Hughes, providing supplemental Technical Annex (Mar. 28, 2002); and Letter to Marlene H. Dortch, Secretary, Federal Communications Commission from Pantelis Michalopoulos, Counsel for EchoStar, and Gary Epstein, Counsel for Hughes (providing complete copy of supplemental Technical Annex) (May 30, 2002).

¹⁹⁸ See fn. 21 *supra*. Section 309(e) of the Communications Act provides that if the FCC "for any reason" is unable to make a finding under Section 309(a) that the public interest would be served by the granting of a license transfer application, then "it shall formally designate the application for hearing on the ground or reasons then obtaining." See EchoStar-Hughes HDO ¶ 289 for list of issues designated for hearing.

to meet their burden of proof to show that, on balance, the proposed merger is in the public interest, and found that the record indicates that substantial potential public interest harms may result from the transaction.¹⁹⁹ In its order, the Commission stated that the record demonstrated that the proposed transaction would eliminate a current viable competitor from every market in the country, whether those markets are served by cable systems or are markets in which no cable systems exist, at best resulting in a merger to duopoly, and at worst a merger to monopoly.²⁰⁰ The Commission's analysis of the potential competitive harms to the MVPD market indicated that the proposed merger would significantly increase concentration in an already concentrated market, and thus the merger should be presumed to create or enhance market power or facilitate its exercise, substantially reduce competition, and harm consumers.²⁰¹ Based on these and other conclusions, the Commission was unable to find that the public interest, convenience and necessity would be served by approving the transfer of control to New EchoStar of the licenses and authorizations controlled by GM/Hughes, DirecTV and EchoStar.²⁰²

64. On October 31, 2002, the United States Department of Justice filed a civil action in US District Court to enjoin the merger of EchoStar and Hughes.²⁰³ The Department of Justice alleged that the proposed acquisition would cause significant harm to competition in numerous local markets for MVPD services throughout the United States, creating a monopoly for millions of households, and a duopoly for tens of millions of households.²⁰⁴ DOJ also alleged that the merger would lead to higher prices and lower service quality for approximately 95% of U.S. television households that would be the case absent consummation of the merger.²⁰⁵

65. On November 27, 2002, the Applicants submitted an amendment to their applications to ameliorate the competition concerns identified in the HDO.²⁰⁶ The Applicants requested that the Commission approve their merger contingent on the execution of a divestiture agreement that would include the divestiture of licenses and assignment of rights to certain frequencies to Rainbow.²⁰⁷ The Applicants also requested that the hearing be suspended pending review of the amended application.²⁰⁸

¹⁹⁹ *Id.* ¶ 275.

²⁰⁰ *Id.*

²⁰¹ *Id.* ¶¶ 104-187.

²⁰² *Id.* ¶ 289.

²⁰³ *United States vs. EchoStar Communications Corp., Hughes Electronics Corp., General Motors Corp., and DirecTV Enterprises, Inc.*, No. 1:02CV02138 (D.C. filed Oct. 31, 2002).

²⁰⁴ *Id.* at 6.

²⁰⁵ *Id.*

²⁰⁶ See *EchoStar-Hughes HDO* ¶ 295.

²⁰⁷ See *Application of EchoStar communications Corporation, General Motors Corporation, Hughes Electronics Corporation, Transferors, and EchoStar Communications, transferee, For Authority to Transfer Control; Application of EchoStar Satellite Corporation and Hughes Electronics Corporation for Authority to Launch and Operate NEW ECHOSTAR 1 (USABBS-16), Amendment to Consolidated Application for Authority to Transfer Control* (Nov. 27, 2002). See also *EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation File Amendment to Transfer of Control, Public Notice, DA 02-3358* (Dec. 4, 2002).

²⁰⁸ *Application of EchoStar communications Corporation, General Motors Corporation, Hughes Electronics Corporation, Transferors, and EchoStar Communications, transferee, For Authority to Transfer Control; Application of EchoStar Satellite Corporation and Hughes Electronics Corporation for Authority to Launch and Operate NEW ECHOSTAR 1 (USABBS-16), Petition for Suspension of Hearing* (Nov. 27, 2002).

On December 10, 2002, the Applicants notified the Commission that they had agreed to terminate the proposed merger and asked to have their applications withdrawn and the hearing terminated.²⁰⁹

2. Satellite-Based Advanced Services

66. **Broadband Satellite Services.** Last year, we reported that both DirecTV and EchoStar offered two-way Internet access services to their subscribers.²¹⁰ DirecTV offers one-way and two-way Internet service under the brand name DirecWay.²¹¹ As of June 30, 2002, DirecWay had over 123,000 residential and small office/home office subscribers in North America, compared to 74,000 one year ago.²¹² EchoStar previously offered satellite-based Internet services through its investment in Starband, in conjunction with satellite operator Gilat, but, in April 2002, EchoStar ended its joint marketing and operations agreement with Starband.²¹³ Starband entered into bankruptcy protection in June 2002.²¹⁴ Starband has approximately 40,000 customers.²¹⁵

67. According to the SBCA, economic conditions have hindered the development of consumer-based satellite high-speed services.²¹⁶ EchoStar questions whether under current economic conditions any stand-alone DBS provider can realistically provide an affordable, competitive, satellite-based, two-way high-speed Internet broadband service to residential customers.²¹⁷

68. **High-Definition Television.** DirecTV and EchoStar provide subscribers with high-definition television ("HDTV") programming. DirecTV offers three channels of high definition

²⁰⁹ Letter from Gary M. Epstein, Counsel for Hughes Electronics Corporation and General Motors Corporation and Pantelis Michalopoulos, Counsel for EchoStar Communications Corporation, to Marlene H. Dortch, Secretary, FCC (Dec. 10, 2002).

²¹⁰ 2001 Report, 17 FCC Rcd at 1275.

²¹¹ Hughes Electronics Corporation introduced one-way high-speed Internet access in 1997 under the DirecPC brand name. The return path is provided via dial-up modem. It launched a two-way version in December 2001, allowing consumers to receive and send data via the dish antenna. Hughes also sold DirecDuo, a single dish antenna capable of supporting high-speed Internet access and video programming from DirecTV. In August 2002, Hughes introduced the DirecWay brand, folding one- and two-way DirecPC products and the DirecDuo product under this single brand name. Some retailers continue to use the DirecPC and DirecDuo product names in their marketing promotions and advertisements. See <http://www.hughes.com/consumer/Direcway.xml> and <http://www.dire:tv.Direcway.comdirecpc.com>. DirecTV also offers Internet access through its DirecTV Broadband affiliate, DirecTV DSL. See DirecTV Broadband, Inc., at <http://www.DirecTVdsl.com>.

²¹² SBCA Comments at 9.

²¹³ 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, 2002*, at 9.

²¹⁴ Andy Pasztor, *EchoStar Will No Longer Offer Web Via Satellite*, WALL STREET JOURNAL, Apr. 5, 2002, at B5. See also Starband Communications, Inc., *Starband Files for Chapter 11; Gilat Commits Interim Financing* (press release), June 3, 2002.

²¹⁵ Starband Communications, Inc., *Starband Wraps Up 2001 as America's Leading Consumer Satellite Internet Provider* (press release), Jan. 7, 2002.

²¹⁶ SBCA Comments at 9.

²¹⁷ EchoStar Comments at 7.

programming: HDNet,²¹⁸ HBO's HBO HD, and Showtime's SHO HDTV.²¹⁹ EchoStar carries seven channels of HD programming: HBO HD, SHO HDTV, CBS,²²⁰ Discovery HD Theater, Dish-On-Demand Pay-Per-View in HDTV format, and an HDTV demo channel.²²¹ According to the SBCA, DBS providers are working to meet the voluntary milestones set by Commission Chairman Powell in April, 2002.²²²

69. **Emerging Services.** In early 2002, EchoStar introduced a channel called Dish Home, which acts as a "portal" for all Dish Network interactive channels, such as customer support services, including account review and bill payment, entertainment, games, sports, and news and weather information.²²³ All navigation is controlled by the remote control. Certain functions, such as bill payment, require a phone line connection.²²⁴ DirecTV is conducting trials of SVOD service with StarZ Encore Group, providing a small catalogue of programming accessible via a DirecTV set-top box with a TiVo PVR built in. The programming is automatically downloaded to the PVR's hard drive and can be accessed at any time by the customer.²²⁵

70. **Access to Programming.** On June 13, 2002, the Commission adopted an Order extending for five years, until October 5, 2007, the statutory prohibition on exclusive contracts for satellite-delivered cable or satellite-delivered broadcast programming between cable operators and their affiliated programmers.²²⁶ In the Order, the Commission rejected requests to expand the prohibition to terrestrially delivered programming or non-vertically integrated programming.²²⁷ SBCA states that,

²¹⁸ HDNet is a national, all-high-definition television network broadcasting 16 hours a day, seven days week, offering a wide range of entertainment and sports programming.

²¹⁹ To receive DirecTV's HDTV service, subscribers must purchase either an HDTV set with a built-in DirecTV receiver, or a separate decoder box, and a second satellite dish that is capable of receiving the signals. See DirecTV, *High Definition Television Programming from DirecTV*, at <http://www.DirecTV.com/DTVAPP/imagine/HDTV.jsp>.

²²⁰ EchoStar carries the high definition signal of WCBS in New York and KCBS in Los Angeles. To qualify to receive these signals, in addition to subscribing to a local-into-local programming package, the customer must live in one of the 17 market areas served by the CBS owned and operated stations and the customer must not be in range of the signals of a CBS affiliate from a nearby city. See EchoStar Communications Corp., at <http://www.dishnetwork.com/content/programming/locals/cbshd/index.shtml>.

²²¹ EchoStar Communications Corp., at <http://faq.dishnetwork.com>. EchoStar subscribers must use certain set-top boxes and they need a second dish antenna pointing to EchoStar's satellite at 61.5° W.L. orbital location. In addition, EchoStar charges \$7.99 per month to subscribe to Discovery HD Theater and requires the use of EchoStar's \$499 Model 6000 HDTV receiver, and EchoStar's \$99 "Enhanced HD Adapter."

²²² SBCA Comments at 9. On April 4, 2002, Commission Chairman Michael Powell proposed that by January 3, 2003, DBS providers carry the signals of up to five digital programming services that are providing value-added digital programming during at least 50% of their prime time schedule. See *Voluntary DTV Plan*, fn. 119 *supra*.

²²³ Steve Caulk, *EchoStar's Portal Sees Quiet Success*, ROCKY MOUNTAIN NEWS, Aug. 19, 2002, available at http://216.239.51.100/search?q=cache:A3CF4zUnmPcC:www.rockymountainnews.com/drmn/technology/article/0,1299,DRMN_49_1333908,00.html+EchoStar%27s+Portal&hl=en&ie=UTF-8. Access to the service is dependent upon the type of set-top box used by the customer. EchoStar charges a fee for access to certain content. For example, games cost \$4.99 per month for unlimited access. See also EchoStar Communications Corp., *EchoStar to Launch New Interactive TV Features Offering Games, Movie Reviews and Customer Support for Dish Network Satellite TV Customers* (press release), Jan. 9, 2002.

²²⁴ See EchoStar, *Dish Home*, at http://www.dishnetwork.com/content/technology/itv/dish_home/index.shtml.

²²⁵ See DirecTV, *DirecTV to Test Starz On Demand SVOD Service on DirecTV Receivers with TiVO* (press release), May 23, 2002.

²²⁶ *Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Development of Competition and Diversity in Video Programming Distribution: Section 628(c)(5) of the Communications Act ("Program Access Order")*, 17 FCC Rcd 12124 (2002). See ¶ 140 *infra*.

²²⁷ See *id.* at 12126.

although the five year extension on program access rules will result in increased competition and continued growth of consumer choice, by not extending the prohibition to terrestrially-delivered programming, vertically-integrated cable companies will continue to circumvent the program access rules by switching the delivery of their programming away from satellite to terrestrial-only means.²²⁸ SBCA states that 43% of new DBS subscribers named "more channels" as an important reason for choosing DBS as their multichannel video provider, and, if it were not for vertically integrated companies withholding "highly-desirable regional programming," DBS could become an even stronger competitor to cable.²²⁹ DirecTV argues that technological advances that have diminished the costs of delivering programming terrestrially, coupled with the efforts of cable MSOs to cluster or trade their systems to form broad, contiguous service areas, have created an environment in which terrestrial distribution has become a more viable method of delivering regional and national programming from production facilities to cable headends.²³⁰ DirecTV urges the Commission to monitor the effects of terrestrial distribution of vertically-integrated programming by cable operators. EchoStar argues that the "terrestrial loophole" be eliminated either by regulation or an act of Congress.²³¹ NCTA disputes the notion of a "terrestrial loophole" and suggests that DirecTV and EchoStar each have the resources and subscriber base to develop their own basic and premium programming, both for their own use and for sale to other MVPDs.²³²

3. Home Satellite Dishes

71. The home satellite dish ("HSD") or C-band segment of the satellite industry continues to experience a decline in subscribership.²³³ Between June 30, 2001, and June 30, 2002, C-band subscribership fell from 1,000,074 subscribers to 700,641 subscribers, a decline of over 30% with an average loss of close to 27,000 subscribers per month.²³⁴ SBCA states that the pace of de-authorizations of C-band service is slowing and satellite programmers are committed to offering programming to this sector.²³⁵ Motorola has introduced two new set-top boxes that enable C-band subscribers to access up to

²²⁸ SBCA Comments at 17. See also DirecTV Comments at 10; EchoStar Comments at 10-11.

²²⁹ SBCA Comments at 17. SBCA states that in Philadelphia, Comcast, which owns sports teams and related programming properties, uses terrestrial delivery of that programming to prevent DBS companies from showing local team sports programming, resulting in a less competitive market in Philadelphia, where DBS penetration is 3.9%, or half of the rest of the top twenty DMAs where it is 9.3% on average. *Id.* at 17-18; EchoStar Comments at 10-11 and n.24. Comcast counters EchoStar stating that: (1) as compared to Philadelphia, DBS penetration is no higher in several other major markets including San Diego and Boston, where there is no terrestrially-delivered, cable affiliated regional sports network, than it is in Philadelphia; (2) the two-year growth rate for DBS in Philadelphia (141%) is the highest of any top 10 market; and (3) the three-year DBS growth rate in Philadelphia (217%) is the third-highest of the top 39 DMAs. Comcast Reply Comments at 21, n.80.

²³⁰ DirecTV Comments at 10.

²³¹ EchoStar Comments at 11.

²³² NCTA Reply Comments at 14.

²³³ C-band subscribers generally have access to approximately 30 satellites, accessible using a rotational dish antenna. Numerous programmers offer varying packages of programming, but generally there are over 600 channels of video and audio programming, with approximately 200 of them available free of charge. For a list of the type of programming available via C-band, including many of the more popular cable networks as well as national broadcast feeds, see Motorola 4DTV, at <http://www.4dtv.com/Programming/programming.html>.

²³⁴ SkyReport, *National DTH Counts June 2001 - June 2002*, at http://www.skyreport.com/dth_counts.htm. See also SBCA Comments at 8, Table 1.

²³⁵ SBCA Comments at 7. The spokesman for SuperStar/Netlink Group and Turner Vision, a major C-band operator, stated that he believes that C-band subscriptions will bottom out between 300,000 and 400,000 subscribers, although he provided no time frame for this to happen. SATELLITE NEWS, *Big Dishes Diminish*, Aug. 12, 2002, at <http://www.tripled.com/sattimes/sattimes.htm> (visited Oct. 3, 2002).

200 channels of digital programming in addition to the 300 or more analog channels currently available to them.²³⁶ C-band subscribers also now have access to high-speed Internet services. In September, 2002, Skyvision, Inc. and Internet Satellite Platform, Inc. announced the formation of CbandNet, a high-speed Internet service, offering monthly service packages ranging in price from \$29.95 to \$44.95.²³⁷ There are now four remaining C-Band programming distributors, Gemstar-TV Guide Superstar/Netlink Group, DSI Distributing, Satellite Receivers, Ltd., and the NRTC.²³⁸

C. Wireless Cable Systems

72. 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. This delivery technology is also known as multichannel multipoint distribution service ("MMDS").

73. 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.²³⁹ 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.²⁴⁰ The Commission decided not to relocate the existing licensees or otherwise modify their licenses. The Commission recognized that it would have to explore the service rules that would apply to permit mobile operations in the 2.5-2.69 GHz band in a separate, future proceeding. On October 17, 2002, the Wireless Telecommunications Bureau sought comment on an industry proposal requesting further rule changes to facilitate provision of two-way fixed and mobile services, while allowing others to continue to provide one-way video services.²⁴¹

²³⁶ Motorola, Inc., *Motorola's 4DTV Digital Sidecar Provides System Upgrade for C-band Subscribers* (press release), Apr. 12, 2002. See also Motorola 4DTV, <http://www.4dtv.com/Products/products.html> (visited Oct. 3, 2002). Motorola offers a stand-alone set-top box functioning as both analog and digital receiver and a so-called side-car set-top box which adds digital functionality to existing analog receivers. In addition, 4DTV offers the DigiCipher II HDD-200 set-top box which allows for the receipt of high definition programming. *Id.*

²³⁷ SATELLITE NEWS, *High-Speed Internet for the Big Dish*, Sept. 24, 2002, at <http://www.tripled.com/sattimes/sattimes.htm> (visited Oct. 3, 2002). See also CbandNet, <http://www.cband.net> (visited Oct. 3, 2002). The company offers Internet services, software, modems, satellite dishes, low noise blockers ("LNB"), dish movers, and accessories.

²³⁸ *Satellite Receivers Buys Disney's C-Band Subscribers*, Satellite Business News FAXUpdate, June 15, 2001.

²³⁹ *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 19112 (1998), *recon.*, 14 FCC Rcd 12764 (1999), *further recon.*, 15 FCC Rcd 14566 (2000).

²⁴⁰ 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 17222 (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.

²⁴¹ See *Wireless Telecommunications Bureau Seeks Comment on Proposal to Revise Multichannel Multipoint Distribution Service and the Instructional Television Fixed Service Rules*, Public Notice, DA 02-2732 (WTB rel. Oct. 17, 2002). The Public Notice sought comment on a paper entitled, *A Proposal for Revising the MDS and ITFS Regulatory Scheme*, filed by the Wireless Communications Association International, Inc., the National ITFS Association and the Catholic Television Network (Oct. 7, 2002).

74. **MMDS Households and Subscribership.** Over 2,650 MDS and MMDS licenses have been issued in the U.S.²⁴² Four companies – Sprint, WorldCom, Nucentrix and BellSouth – hold more than half of the licenses.²⁴³ Collectively, these four companies can potentially reach 75% of the U.S. population.²⁴⁴ The number of MMDS subscribers, however, has declined to approximately 490,000 from 700,000 last year.²⁴⁵ MMDS has never become a significant competitor in the market for the delivery of video programming,²⁴⁶ rather many MMDS providers are focusing on data transmission rather than video service.²⁴⁷ Moreover, the future of these services may depend on the ability of these companies to develop better technology.²⁴⁸ Sprint announced that it has put MMDS deployment on hold until substantial progress is made on second-generation MMDS technology.²⁴⁹ The future competitive impact of MMDS is further clouded by the bankruptcy filings of two of the major companies (WorldCom and Nucentrix), each holding about 17% of MMDS licenses.²⁵⁰ In March 2002, Nucentrix announced that it had entered into agreements to convert the majority of its video customers in markets in Oklahoma, Texas, and the Midwest to DBS programming provided by DirecTV and Pegasus, and in central Texas to Time Warner Cable, as a replacement for its MMDS video service.²⁵¹ Nucentrix plans to use its MMDS spectrum to provide broadband Internet and other advanced wireless services.²⁵² WorldCom has indicated that, as part of its strategy to improve its financial outlook, it may consider selling part or all of its MMDS business.²⁵³

D. Private Cable Systems

75. 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.²⁵⁴ PCOs receive programming via a master satellite antenna and distribute television signals via terrestrial wiring to urban and suburban multiple

²⁴² BIA Financial Network, *The MMDS Industry: A Look Into the Industry's Most Significant Operators*, September 2002, at 5.

²⁴³ *Id.*

²⁴⁴ *Id.* at 6.

²⁴⁵ NCTA Comments at 12.

²⁴⁶ MMDS subscribers have never represented more than approximately a 1.5% share of all MVPD households. See *2000 Report*, 16 FCC Rcd at 6110, Appendix C, Table C-1.

²⁴⁷ FCC, OPP Working Paper #37, *Broadcast Television: Survivor in a Sea of Competition*, September 2002, at 63.

²⁴⁸ BIA Financial Network, *The MMDS Industry: A Look Into the Industry's Most Significant Operators*, September 2002, at 12. MMDS must have a “line-of-sight” path between transmitter and receiver. Technical limitations include signal strength and blockage by terrain.

²⁴⁹ Sprint, *Sprint to Terminate ION Efforts; Announces Additional Actions to Improve Competitive Positioning and Reduce Operating Costs in FON Group* (press release), Oct. 17, 2001. Sprint has begun field trials of second generation technology in its Houston, Texas market. Kevin Fitchard, *Sprint Revives MMDS Plans*, TELEPHONY, May 13, 2002.

²⁵⁰ BIA Financial Network, *The MMDS Industry: A Look Into the Industry's Most Significant Operators*, September 2002, at 12.

²⁵¹ Nucentrix Broadband Networks, *Nucentrix Announces Conversion of Video Subscribers* (press release), Mar. 19, 2002.

²⁵² *Id.* See also Nucentrix Broadband Networks, *Nucentrix Applauds MDS/ITFS Proposal for Next Generation of Broadband Wireless Services* (press release), Oct. 7, 2002.

²⁵³ Sue Marek, *Sidgmore: All Wireless Assets for Sale*, WIRELESS WEEK, July 3, 2002.

²⁵⁴ 47 U.S.C. § 522(7).

dwelling units ("MDUs") and commercial multiple tenant units ("MTUs"). PCOs are in direct competition with franchised cable operators. They generally offer the same basic service tiers as their competitors.²⁵⁵ PCOs are continuing to combine analog antenna and DBS systems in order to provide more service offerings. In addition, digital video and high-speed Internet access offerings are becoming increasingly important to landlords who are seeking new tenants, or are responding to the demands of their current tenants.²⁵⁶

76. PCOs are not regulated as traditional cable operators.²⁵⁷ Some PCOs' systems use microwave transmissions and wires to serve multiple buildings that are not commonly owned.²⁵⁸ 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 621.²⁵⁹ 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 private cable operators. 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.²⁶⁰ In that proceeding, several commenters contended that use of the lower CARS band of 12.70-31.20 will help PCOs compete with cable MSOs.²⁶¹

77. PCOs consist of hundreds of small and medium-sized firms throughout the United States.²⁶² During the late 1990s, a number of large PCOs, including OpTel, SkyView, and Cable Plus, declared bankruptcy.²⁶³ OpTel, one of the largest PCOs, has emerged recently from Chapter 11

²⁵⁵ Larry Kessler, *Boring? Not Any More. Exclusive and Perpetual Contracts, Private and Wireless Broadband*, December 2001, at 18.

²⁵⁶ Jay Hartz, *Post Wiring Properties for Broadband Connectivity: Keeping up With Resident Demands*, *Broadband Properties*, April 2002, at 12.

²⁵⁷ 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.

²⁵⁸ *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 (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 at 13450 (2000).

²⁵⁹ *Entertainment Connections, Inc., Motion for Declaratory Ruling*, 13 FCC Rcd at 14277 (1998).

²⁶⁰ *Amendment of Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service*, 17 FCC Rcd 9930 (2002).

²⁶¹ 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.

²⁶² For a list of private communications operators, see the Independent Multi-Family Communications Council's web site under Private Communication Operator ("PCO") at <http://www.imcc-online.org/membership>.

²⁶³ Larry Kessler, *Winning the Battle and the War: What Does It Take?* *Private and Wireless Broadband*, July 2000, at 10.

bankruptcy under the name TVMAX.²⁶⁴ Many PCOs serve approximately 3,000-4,000 subscribers, but the larger operations serve as many as 15,000-55,000 subscribers each.²⁶⁵ As of June 2002, PCO subscribership increased by 100,000 subscribers, reaching 1.6 million subscribers, or 1.7% of the MVPD market.²⁶⁶

78. The Commission has issued a *Second Further Notice of Proposed Rulemaking* seeking comments on the advantages and disadvantages of exclusive and perpetual contracts in promoting a competitive environment, and whether there are circumstances in which the Commission should adopt restrictions on exclusive and perpetual contracts in order to promote competition in the MDU market.²⁶⁷ In that pending proceeding, PCOs, real estate interests, and some telecommunications entities support exclusive contracts for video programming services, asserting that exclusives enable alternative MVPDs to gain a foothold in the MDU market, and enable alternative and new MVPDs to obtain financing, recoup costs, and expand operations in the MDU market.²⁶⁸ The Independent Multi-Family Communications Council ("IMCC"), the trade organization representing PCOs, states that exclusive contracting by PCOs is essential to their ability to compete with franchised cable operators and should not, therefore, be capped.²⁶⁹ If caps are adopted, IMCC and other PCO advocates endorse long-term caps of ten to 15 years.²⁷⁰ IMCC urges the Commission however, to implement rules that would allow property owners to renegotiate or reject perpetual contracts so that residents can enjoy the benefits of service from competing providers.²⁷¹

E. Broadcast Television Service

79. Broadcast networks and stations supply video programming over the air directly to consumers who do not subscribe to an MVPD service. Some consumers receive broadcast signals via over-the-air transmission whereas others receive signals via their cable, DBS, or other MVPD service. Since the *2001 Report*, the number of commercial and noncommercial television stations increased to 1,712 as of June 30, 2002, from 1,678 as of June 30, 2001.²⁷² The recession of 2001 affected total television broadcast advertising revenues, which declined to \$35.9 billion in 2001, a 12% decrease from

²⁶⁴ Larry Kessler, *Santa or the Grinch: Who's Visiting You Next?* Broadband Properties, January 2002, at 18.

²⁶⁵ *1999 Report*, 15 FCC Rcd at 1023. See also *Ten Largest Private Cable Operators/Multiple System Operators*, Private Cable & Wireless Cable, Dec. 1999, at 4.

²⁶⁶ NCTA Comments at 12.

²⁶⁷ *Telecommunications Services Inside Wiring, Customer Premises Equipment, Implementation of the Consumer Protection and Competition Act of 1992: Cable Home Wiring*, Report and Order and Second Further Notice of Proposed Rulemaking ("Inside Wiring Order"), 13 FCC Rcd 3659 (1997). A perpetual contract runs for the term of a cable franchise and any extensions thereof. Exclusive contracts specify that only a particular MVPD, and no other, may provide video programming and related services to residents of an MDU.

²⁶⁸ Community Associations Institute Comments in CS Docket No. 95-184, at 2; Wireless Cable Association Comments in CS Docket No. 95-184, at 1-8; Real Estate Alliance *Ex Parte* in CS Docket No. 95-184, May 24, 2000, at 1-3; Building Owners and Managers Association International Further Joint Comments in CS Docket No. 95-184, Intelicable *Ex Parte* in CS Docket No. 95-184, June 16, 2000, at 1-3; OpTel Comments at 4-6; GTE Comments in CS Docket No. 95-184, at 3. See ¶¶ 120-122 *infra*.

²⁶⁹ IMCC Comments in CS Docket No. 95-184 at 4.

²⁷⁰ *Id.* at 4-9.

²⁷¹ *Id.* at 11.

²⁷² Compare Federal Communications Commission, *Broadcast Station Totals as of June 30, 2002*, FCC News Release (Aug. 26, 2002) with Federal Communications Commission, *Broadcast Station Totals as of June 30, 2001*, FCC News Release (July 13, 2001).

\$40.8 billion in 2000.²⁷³ Advertising revenues for the seven most widely distributed broadcast networks (ABC, CBS, Fox, NBC, PAX, UPN, and WB) fell 8% from \$20.3 billion in 2000 to \$18.6 billion in 2001.²⁷⁴ In contrast, cable programming networks experienced a 3.8% increase in advertising revenue in 2001, earning \$10.7 billion in advertising revenue compared to \$10.3 billion in 2000.²⁷⁵

80. During the 2001-2002 television season,²⁷⁶ broadcast television stations,²⁷⁷ accounted for a combined average 58.9 share of prime time viewing among all television households,²⁷⁸ compared to 63 share in the previous season.²⁷⁹ For total day (24-hour) viewing, broadcast television stations accounted for a combined 52.4 share of viewing in all TV households, also down from a 56.2 share the previous season. During the 2001-2002 television season, non-broadcast networks,²⁸⁰ accounted for a combined average 57 share of prime time viewing among all television households, up from 52.6 share the previous season. For total day (24-hour) viewing, cable networks accounted for a combined 58.8 share of viewing in all TV households, also up from a 54.7 share last season.

81. We previously reported on consolidation in the broadcast industry and on “repurposing,” which continues to become more common. Repurposing deals between NBC and PaxTV, ABC with Lifetime and VH-1 and Fox with FX were reported in last year’s report.²⁸¹ This season, Fox and Warner Bros. have struck repurposing deals with MTV; Disney is repurposing ABC sitcoms on its ABC Family network; NBC is experiencing success with first run *Law and Order* and *Criminal Intent* rebroadcasts on USA network; and Comedy Central rebroadcasts NBC’s *Late Night with Conan O’Brien* the next day at 1 p.m. and 7 p.m.²⁸² In reverse examples of repurposing, NBC is showing episodes of Court TV’s original *Forensic Files* and ABC is airing USA network’s *Monk* on Monday nights after USA airs it on Friday.²⁸³

82. 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.²⁸⁴ As of September 25, 2002, two of the top-four network affiliates in the top ten television markets were broadcasting DTV service.²⁸⁵ In television markets 11-30, 75 of 79 stations were broadcasting DTV

²⁷³ Television Bureau of Advertising, *Local Broadcast Revenues Off Last Year* (press release), Apr. 17, 2002.

²⁷⁴ *Id.*

²⁷⁵ NCTA, *Cable Advertising Revenue: 1984-2001 (In Millions)*, Cable Television Developments 2002, at 12.

²⁷⁶ September 2001 to August 2002.

²⁷⁷ Includes network affiliates, independent stations, and public broadcast stations.

²⁷⁸ *See* fn. 39 *supra*.

²⁷⁹ Nielsen Media Research, *Primetime: Total US Ratings By Viewing Source September 2001-August 2002*, Oct. 2002; Nielsen Media Research, *Total Day 24 Hours 6 am - 6 am: Total US Ratings By Viewing Source September 2000-August 2001*, Oct. 2001.

²⁸⁰ Includes basic (BST and CPST) networks, as well as premium and PPV networks, distributed by MVPDs.

²⁸¹ *2001 Report*, 17 FCC Rcd at 1283 (2002). “Repurposing” generally involves a re-run of broadcast content on a different network (cable or broadcast) shortly after it airs originally on network affiliate stations.

²⁸² Paige Albiniak, Steve McClellan and Dan Trigoboff, *A Season of Seeing Double*, BROADCASTING & CABLE, Sept. 30, 2002, at 7.

²⁸³ *Id.*

²⁸⁴ *See 2001 Report*, 17 FCC Rcd at 1283.

²⁸⁵ 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>.

service. Ninety percent of the more than 1,300 commercial television stations have been granted a DTV construction permit or license, and 643 are on the air with DTV operation.²⁸⁶

83. Current use of DTV spectrum involves HDTV transmissions of programs that are also broadcast in standard NTSC analog format over paired analog facilities.²⁸⁷ For instance, ABC is broadcasting all of its prime time scripted series and theatrical movies in HDTV during the 2002-2003 TV season.²⁸⁸ CBS states that each of its 18 prime time dramas and comedies are broadcast in HDTV in partnership with digital television set manufacturers Samsung and Zenith.²⁸⁹ NBC broadcasts ten prime time shows in HDTV, and PBS offers one or two HDTV programs per week.²⁹⁰ The WB network offers four HDTV programs this season.²⁹¹

84. In *Compatibility Between Cable Systems and Consumer Electronics Equipment*, the Commission directed the cable and consumer electronics industries to report every six months until October 2002 on the progress implementing the February 2000 Program and System Information Protocol ("PSIP") agreement between NCTA and the Consumer Electronics Association ("CEA").²⁹² Recently, an extension was granted for the filing of the October 2002 progress reports based on the representations of the cable and consumer electronics industries that they were engaged in constructive discussions regarding compatibility between cable systems and digital television sets, and filing the reports would detract from that effort.²⁹³

85. It has been alleged that the lack of a comprehensive copy protection regime also has slowed the DTV transition. Since 1996, an inter-industry group called the Copy Protection Technical Working Group ("CPTWG") has served as a discussion forum for general copy protection issues. On November 28, 2001, the Broadcast Protection Discussion Subgroup ("BPDG") was formed under the auspices of CPTWG in order to specifically address digital broadcast copy protection. The BPDG recently announced a consensus on the use of a "broadcast flag" standard for digital broadcast copy protection. This consensus would require use of the Redistribution Control Descriptor, as set forth in ATSC Standard A/65A (the "ATSC flag"), to mark digital broadcast programming so as to limit its improper use. Despite the consensus reached on the technical standard to be implemented, final agreement has not been reached on compliance requirements, enforcement mechanisms, or criteria for approving the use of specific protection technologies in consumer electronics devices. On August 8, 2002, the Commission adopted a *Notice of Proposed Rule Making* to explore whether it could and should mandate use of the "broadcast-flag" or some other copy protection mechanism for DTV to protect digital broadcast content from unauthorized copying and redistribution.²⁹⁴

²⁸⁶ *Id.* While over 600 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.

²⁸⁷ In his *Voluntary DTV Plan*, Chairman Powell requested that the four largest broadcast networks (*i.e.* ABC, CBS, Fox, and NBC) provide HDTV, or other "value-added DTV programming," during at least 50% of their prime time schedules beginning with the 2002-2003 season. *See* fn. 119 *supra*.

²⁸⁸ *Mass Media*, Comm. Daily, Aug. 29, 2002, at 6.

²⁸⁹ *HD News*, CableFax Daily, Aug. 29, 2002, at 4.

²⁹⁰ *See* <http://www.nbc.com/nbc/footer/FAQ..shtml>; *see* <http://www.pbs.org/digitaltv/dtvsched.htm>.

²⁹¹ *Networks to Air More Shows in HDTV*, USA TODAY, Sept. 29, 2002, at D1.

²⁹² Report and Order, 15 FCC Rcd 17568 (2000). *See also* 2001 Report, 17 FCC Rcd at 1284.

²⁹³ Letter from W. Kenneth Ferree, Chief, Media Bureau to Michael Petricone, Consumer Electronics Association and Neil Goldberg, National Cable and Telecommunications Association, PP Docket No. 00-67 (Nov. 21, 2002).

²⁹⁴ *Digital Broadcast Copy Protection*, 17 FCC Rcd 16027 (2002).

86. 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.²⁹⁵ 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,²⁹⁶ 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.²⁹⁷ The *Report and Order* also contains an initial determination that the requirement for cable operators to carry "primary video" refers to a single digital programming stream and "program-related" content.²⁹⁸ Petitions to reconsider this decision are currently before the Commission.

87. CEA reports the sale of DTV products is gaining momentum. DTV unit sales for the year 2002 through September totaled near 1.6 million, 83% higher than for the same period in 2001.²⁹⁹ As a result, broadcasters continue to engage in tests of various DTV products, such as HDTV, multiple SDTV services, ancillary services, or some combination.³⁰⁰ It is difficult to assess the competitive impact of DTV service on the MVPD market at this time, other than to observe that the potential for a positive competitive impact remains.

F. Other Entrants

1. Internet Video

88. In addition to the more traditional video services, video programming also is provided over the Internet. In some cases, the video is available only for downloading onto a computer hard drive for later viewing, and in other cases, it is provided in real-time (also known as "streaming video"). Broadcast-quality streaming video service requires a high-speed broadband connection of about 300 Kbps or higher, and high-speed Internet access still is limited, with just over 14 million broadband subscribers as of June 2002.³⁰¹ Furthermore, most Internet video content currently available has been intentionally degraded to facilitate streaming at 56 Kbps or slower, so that dial-up access users can download it.³⁰²

89. Nevertheless, the number of homes with access to the Internet continues to grow, and many of those continue to access video content via the Internet. As of the June 2002, an estimated 54 million Americans subscribed to either a dial-up or a broadband Internet access service, compared with 50 million

²⁹⁵ *Carriage of Digital Television Broadcast Signals* ("DTV Must Carry Order"), 16 FCC Rcd 2598 (2001).

²⁹⁶ *Id.*; see also 47 U.S.C. § 534.

²⁹⁷ See DTV Must Carry Order.

²⁹⁸ *Id.*

²⁹⁹ CEA, *September DTV Products Sales Make New Record* (press release), Oct. 10, 2002. Factory to dealer sales of DTV units are projected to over four million units for 2003. See <http://www.ce.org/publications/vision/janfebmar2002/p03b.asp>.

³⁰⁰ See 2001 Report, 17 FCC Rcd at 1285.

³⁰¹ Richard Bilotti, Benjamin Swinburne, Megan Lynch, *Truth, Lies and Truck Rolls: Understanding Product Profitability*, Morgan Stanley, October 4, 2002, at 46-7.

³⁰² Matthew York, *A New Way to Share Video*, Videomaker, Jan. 2002, at <http://www.findarticles.com>. The maximum speed of an analog telephone dial-up modem is currently 56.6 kbps.

as of June 2001.³⁰³ Additionally, as of July 2002, approximately 51% of those online have accessed streaming audio or video at least once before, and 23% of those online have accessed streaming audio or video within the last month.³⁰⁴ These usage patterns are similar to those observed the previous year.³⁰⁵

90. Today, most Internet video that is widely distributed is shorter in length than traditional television programming. As we have reported in the past, many traditional television programmers continue to offer Internet video versions of their programming.³⁰⁶ Sports and news programming remain the most common categories of streaming video programming currently available over the Internet, but other genres of video programming (e.g., comedy, drama, informational) are also available. As the technology improves, and access to such technologies increases, we expect the type and amount of video available over the Internet will increase as well.

2. Home Video Sales and Rentals

91. 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.³⁰⁷ As such, they offer some level of competition to DBS, broadcast television and cable television for the consumer's time and money. Cable video-on-demand also is an emerging competitive service to home video.³⁰⁸

92. Approximately 93 million U.S. households, or about 90% of all households, have at least one VCR, with nearly 46 million households owning at least two VCRs.³⁰⁹ By the end of 2001, the number of homes with DVD players reached approximately 13.7 million, and it is estimated that over 26 million homes will have DVD players by the end of 2004.³¹⁰ In addition, about two million homes have laser disc players.³¹¹ U.S. consumers are expected to spend over \$26 billion renting and buying prerecorded video in 2002, almost a 17% increase over the \$22.5 billion spent in 2000.³¹² Total rental revenue is projected at \$11.4 billion for 2002 compared to \$10.9 billion in 2000, an increase of 4.4%.³¹³ Total revenue from video sales is a projected \$14.8 billion in 2002, up from \$11.6 billion in 2000, an

³⁰³ Richard Bilotti, Benjamin Swinburne, Megan Lynch, *Truth, Lies and Truck Rolls: Understanding Product Profitability*, Morgan Stanley, October 4, 2002, at 46-7.

³⁰⁴ Arbitron, Inc., *Arbitron Internet 9: The Media and Entertainment World of Online Consumers*, Sept. 5, 2002, at <http://www.arbitron.com>.

³⁰⁵ See 2001 Report, 17 FCC Rcd at 1285.

³⁰⁶ *Id.* at 1286-87.

³⁰⁷ See, e.g., 2001 Report, 17 FCC Rcd at 1288. See also *Competition, Rate Regulation and the Commission's Policies Relating to the Provision of Cable Service*, 5 FCC Rcd 4962, 5019-20 (1990). See also Comcast Reply Comments at 16 (citing newspaper stories quoting consumers who say they use DVD subscription services, such as Netflix, instead of buying pay-per-view movies from an MVPD or otherwise watching television).

³⁰⁸ See ¶¶ 39-41 *supra*.

³⁰⁹ *Mass Media*, Comm. Daily, Aug. 18, 2002 at 7. Other sources provide alternative estimates of VCR penetration ranging from approximately 85% to 95% of all television households. See, e.g., Frank Ahrens and Dina El Boghdady, *It's the Final Reel for the VCR*, WASHINGTON POST, June 21, 2002, at A1.

³¹⁰ Veronis Suhler, *Communications Industry Forecast 2001* ("Veronis Suhler"), at 6, 18, 192, and 194.

³¹¹ Tom Shales, *Shall We Dance? With DVD, Indeed*, WASHINGTON POST, June 2, 1999, at C1.

³¹² Veronis Suhler at 192 and 194.

³¹³ *Id.*

increase of 13%.³¹⁴ By the end of 2002, DVDs will have increased their share of the video rental and sales markets to 34%, up from about 20% in 2000.³¹⁵

93. As reported last year, the home video sales and rental industry is considered competitive, with almost 20,000 video specialty stores selling or renting home video programming.³¹⁶ There also are more than 8,000 retail outlets, primarily supermarkets and drug stores that rent videos.³¹⁷ In addition, mass merchandise stores (e.g., Wal-Mart and Target) and electronics chain stores (e.g., Best Buy and Circuit City) compete with specialty video stores in the sale of videos.³¹⁸ In recent years, the home video sales and rental industry has undergone a period of consolidation, with many independent operators selling to larger retail outlets or closing their businesses.³¹⁹ The Internet also has become a source for video rentals³²⁰ and sales.³²¹

94. Another home video technology is the personal video recorder ("PVR").³²² This device is capable of pausing, recording and rewinding live TV in digital form on an internal hard drive instead of videotape. It also has the capacity to record as much as 60 hours of programming, outperforming the average six-hour videotape tenfold.³²³ One source reports that more than one million homes have PVRs, and that number will grow to 15 million homes in five years.³²⁴ There are several companies offering PVRs, including SonicBlue, TiVo, Inc., and Microsoft. SonicBlue, maker of the ReplayTV line of PVRs, is offering a service option of \$9.95 monthly or a one-time service fee of \$250 to use its units. That is in addition to the box purchase, which ranges from about \$400 to \$1300.³²⁵ TiVo, with about 460,000 subscribers,³²⁶ is working on adding digital music capabilities and technologies that allow TiVo boxes to organize and display digital-photo collections. TiVo plans to offer AOL's instant-messaging service and TV-based party games.³²⁷ TiVo service costs \$12.95 a month or a \$250 lifetime subscription.³²⁸ PVR functionality also is included in the set-top boxes of some MVPDs. DirecTV offers a combination DBS

³¹⁴ *Id.*

³¹⁵ *Id.*

³¹⁶ See 2001 Report, 17 FCC Rcd at 1289.

³¹⁷ *Id.*

³¹⁸ *Id.*

³¹⁹ *Id.* at 1290.

³²⁰ For example, for a monthly fee of \$20, Netflix allows consumers to rent DVDs from its Internet site, with the movies sent to the consumer and returned to the company through the mail. Over half a million people have signed up for this service. See Leslie Walker, *Movies by the Mail*, WASHINGTON POST, Apr. 11, 2002, at E1. In addition, consumers in several markets can search Blockbuster's inventory over the Internet and reserve videos online before going to the store to pick them up. See <http://www.blockbuster.com>.

³²¹ For example, Best Buy and Amazon.com sell video programming through their Internet sites. See <http://www.bestbuy.com> and <http://www.amazon.com>. Express.com is limited to the sales of DVDs. See <http://www.express.com>.

³²² These devices also are referred to as Digital Video Recorders ("DVRs").

³²³ Daniel Greenberg, *Giving Your Television a Brain*, WASHINGTON POST, June 6, 2002, at H7.

³²⁴ See *Mass Media*, Comm. Daily, June 23, 2002 at 8.

³²⁵ See *ReplayTV Adds Monthly Fee Option*, Multichannel News Day, Aug. 30, 2002, at 2.

³²⁶ See *TiVo Narrows Loss*, Multichannel News Day, Aug. 23, 2002, at 1.

³²⁷ Daniel Greenberg, *Giving Your Television a Brain*, WASHINGTON POST, June 2, 2002, at H7.

³²⁸ *Id.*

receiver/digital VCR, based on TiVo's digital technology.³²⁹ In addition, EchoStar offers set-top boxes, the DISHPVR 501/508 and DishPVR 721, with varying PVR capabilities.³³⁰ Approximately 40% of new EchoStar subscribers purchase a PVR capable set-top receiver.³³¹

G. Local Exchange Carriers

95. 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. According to the statute, common carriers may: (1) provide video programming to subscribers through radio communications under Title III of the Communications Act;³³² (2) provide transmission of video programming on a common carrier basis under Title II of the Communications Act;³³³ (3) provide video programming as a cable system under Title VI of the Communications Act;³³⁴ or (4) provide video programming by means of an open video system ("OVS").³³⁵

96. As reported last year, the four largest incumbent LECs have largely exited the traditional cable service business.³³⁶ BellSouth alone continues to operate some overbuild cable systems.³³⁷ Thus, LEC-operated wireline MVPD service is not a widespread competitor to cable. A number of smaller incumbent LECs, however, are offering, or preparing to offer, MVPD service over existing telephone lines. Smaller incumbent LECs, in individual communities, may offer competition to incumbent cable providers.

97. *In-Region Cable Franchises.* Three of the four largest incumbent LECs have shut down or sold their in-region cable franchises.³³⁸ The exception is BellSouth, which currently holds 20 cable

³²⁹ The unit sells for \$199, and the monthly fee DirecTV will charge will be \$4.99, or half the regular TiVo subscription fee, for customers subscribing to Total Choice and Total Choice Plus packages, \$31.99 per month and \$35.99 per month, respectively, and no charge for customers subscribing to the Total Choice Premier package, which is \$81.99 per month. See DirecTV Inc., at <http://www.directv.com/DTVAPP/imagine/TIVO.jsp>. See also *DirecTV Pushes Play on New TiVo Box*, SATELLITE BUSINESS NEWS, Aug. 9, 2002, at 2.

³³⁰ See EchoStar Communications Corp., at <http://www.dishnetwork.com/content/technology/receivers/index.shtml> (visited Nov. 13, 2002).

³³¹ Duffy Hayes, *PVR in Satellite's Sights...Is It in Cable's?*, CED MAGAZINE, July 2002, available at <http://www.cedmagazine.com/ced/2002/0702/id6.htm>.

³³² 47 U.S.C. § 571(a)(1).

³³³ 47 U.S.C. § 571(a)(2).

³³⁴ 47 U.S.C. § 571(a)(3).

³³⁵ 47 U.S.C. § 571(a)(3)-(4).

³³⁶ *2001 Report*, 17 FCC Rcd at 1291. Some of the four largest LECs are, however, offering bundles of telecommunications service which include resold DBS service. See, e.g., Jon Van, *SBC Looks for Joy in Bundled Services*, CHICAGO TRIBUNE, Nov. 18, 2002.

³³⁷ In the *2001 Report*, the Commission reported that BellSouth was "reselling DBS service." BellSouth was not at that time nor is it now reselling any DBS service. BellSouth was merely transitioning its MMDS customers to EchoStar or other video providers in connection with the restructuring of its MMDS business. See *2001 Report*, 17 FCC Rcd at 1250, 1291.

³³⁸ *2001 Report*, 17 FCC Rcd at 1291-2. Verizon, which inherited systems in California and Florida when it purchased GTE, is attempting to sell those properties. Verizon 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 some are now subject to litigation. E-mail from Clint E. Odom Director, Federal Regulatory Affairs, Verizon Communications, Inc., Nov. 21, 2002.

franchises with the potential to pass 1.4 million homes, and provides cable service in 14 of its franchise areas. This is unchanged from last year.³³⁹

98. **VDSL.** Qwest Communications International offers video, high-speed Internet access and telephone service over existing copper telephone lines using very high-speed digital subscriber line ("VDSL") in Omaha, Nebraska; Phoenix, Arizona; and Boulder and Highlands Ranch, Colorado.³⁴⁰ Small LECs continue to deploy VDSL, although deployment has slowed in the face of financial difficulties in the telecommunications industry and the economy as a whole. Forty-five LECs, mostly small, are using VDSL technology to offer video and data, with roughly 108,000 video subscribers, a growth of 8,000 subscribers in the last year.³⁴¹ For example, Hometown Online, Inc., a subsidiary of Warwick Valley Telephony Company, offers digital video service using VDSL in several communities on the New York-New Jersey border.³⁴² We previously reported on companies investigating deployment of video over the lower bandwidth asymmetric digital subscriber line service ("ADSL"),³⁴³ but this appears to remain in the trial stage.³⁴⁴

H. Electric and Gas Utilities

99. Electric and gas utilities possess some assets, such as access to public rights of way, existing telecommunications facilities, and existing relationships with customers, that appear to make them potential entrants into the MVPD market. Some utilities continue to move forward with ventures involving multichannel video programming distribution. As with LECs, however, utilities are not yet widespread competitors in the telecommunications or cable markets. Mainly, it appears that utilities will provide MVPD competition in scattered localities. This is potentially most beneficial in rural areas where cable operators and telephone companies may not be willing or able to provide the full range of advanced telecommunications services.³⁴⁵

100. Some utilities build systems on their own, and others enter joint ventures with other companies. Starpower, a joint venture between RCN and Potomac Electric and Power Company ("PEPCO") in the Washington, D.C., area, offers competitive cable, telephone, and data services. It serves 23,780 customers and reportedly has spurred competitive responses from the incumbent cable

³³⁹ E-mail from Rick DeTurk, Manager – Regulatory, BellSouth Corp., Oct. 21, 2002. 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.

³⁴⁰ NCTA Comments at 22. See also <http://www.qwest.com/vdsl/>.

³⁴¹ E-mail from Roger Bindl, Director, Engineering & Consulting Companies, Next Level Communications, Oct. 6, 2002.

³⁴² See, generally, Hometown Comments. Hometown reports difficulty with acquiring programming and difficulty dealing with local and state regulatory agencies, and states that this indicates a need for federal intervention to open the market to competition.

³⁴³ 2001 Report, 17 FCC Rcd at 1292-3.

³⁴⁴ E-mail from Roger Bindl, Director, Engineering & Consulting Companies, Next Level Communications, Oct. 6, 2002.

³⁴⁵ For instance, Kutztown, Pennsylvania, is building a fiber-to-the-home system to offer its 2,230 residents a complete package of advanced telecommunications services. The municipal utility states that the efficiencies that come from owning an existing network and the equipment necessary to maintain the network will allow the utility to offer service where others are unable. Matt Stump, *Kutztown, Pa., Muni Has Lots of Fiber*, Broadband Week, Mar. 25, 2002. Cable competitors contend, however, that these municipal overbuilds often achieve lower prices or offer more advanced services by subsidizing their rates with revenues from their utility operations. See, e.g., *Municipalities Seek Greater Role in Rural Broadband Rollout*, Comm. Daily, Jan. 16, 2002, at 5-6.

provider.³⁴⁶ Siegemcom is offering bundled video, voice, and data services in Evansville and Newburg, Indiana, as does Seren Innovations in St. Cloud, Minnesota and Contra Costa County, California.³⁴⁷ Everest Connections Communications Corporation and Ex-Op of Missouri, Inc., collectively owned by the energy company Aquila, Inc., offer more than 300 channels of cable service and high-speed Internet service in Lenexa, Shawnee, and Overland Park, Kansas, and Kansas City and Kearney, Missouri.³⁴⁸

101. The American Public Power Association ("APPA") performed a survey of its members at the end of 2001, finding that 450 public power systems offer some kind of broadband services. Of those, 91 offered video service, 59 cable modem service, and 29 local telephone service.³⁴⁹

I. Broadband Service Providers, Open Video Systems, and Overbuilders

102. Last year we addressed a new class of providers, BSPs.³⁵⁰ BSPs attempt to overcome the historical difficulties of overbuilding by building state-of-the-art systems in communities with favorable demographics and by offering bundles of services to increase per subscriber revenue and decrease churn. Even with this strategy, as we reported last year, BSPs face considerable challenges.³⁵¹ BSPs cite "significant barriers to entry" (discussed below) as well as "the current telecommunications industry recession and the limited capital markets" as factors causing BSPs to curtail growth and investment plans.³⁵²

103. RCN is the largest BSP in the country, and the 13th largest MVPD. For the year ending June 30, 2002, RCN's revenue increased by 22%; its number of marketable homes increased by eight percent to 1.5 million; and the number of network connections increased by 22% to almost one million.³⁵³ At the end of June 30, 2002, RCN reported a total of 506,700 video subscribers.³⁵⁴ This year, RCN introduced a "supercharged" cable modem service, with download speeds of up to three megabits per second, double the speeds of standard cable modem and ADSL service.³⁵⁵ Like all BSPs, however, RCN has experienced trouble acquiring financing and, as a result, has scaled back expansion plans and focused

³⁴⁶ BSPA Comments at 24.

³⁴⁷ NCTA Comments at 22.

³⁴⁸ Utilicorp Comments at 1.

³⁴⁹ APPA, *Public Power: Powering the 21st Century with Community Broadband Services* (fact sheet), June 2002.

³⁵⁰ "Broadband service provider" is the term used by these new entrants to describe the range of services they offer and is not intended to imply anything with respect to Commission policy or proceedings that might involve broadband services. Usually, these services can be purchased separately as well as in a bundle. We have defined "broadband providers" as, "newer firms that are building state-of-the-art facilities-based networks to provide video, voice and data services over a single network." *2001 Report*, 17 FCC Rcd at 1294.

³⁵¹ *2001 Report*, 17 FCC Rcd at 1295.

³⁵² BSPA Comments at iv.

³⁵³ RCN Corp., *RCN Announces Second Quarter 2002 Results* (press release), Aug. 7, 2002. The number of "marketable homes" consists of homes passed minus households inaccessible due to other constraints such as inability to enter an MDU. The number of "network connections" counts each service received as one network connection. Thus, a household that signs up for video, local telephone, and high-speed Internet access service counts as three network connections. Long distance service is not counted as a separate network connection.

³⁵⁴ *Id.* The current number of video subscribers is 80,000 less, because RCN sold incumbent cable systems it owned in August. RCN Corp., *RCN to Receive \$245 Million for Non-Strategic New Jersey Cable Systems* (press release), Aug. 27, 2002.

³⁵⁵ RCN Corp., *RCN Launches "Super-Charged" High-Speed Internet Access Service in Company's San Francisco and Los Angeles Markets* (press release), July 2, 2002.

on marketing to existing passed homes.³⁵⁶ With these changes, RCN has been successful in reducing expenditures and is narrowing its losses.³⁵⁷

104. WideOpenWest ("WOW") is the second largest overbuilder.³⁵⁸ WOW is the 15th largest MVPD and, as of June 2002, served 310,000 subscribers.³⁵⁹ WOW serves 107 communities in Colorado, Indiana, Illinois, Michigan, and Ohio.³⁶⁰ WOW suspended build-out commitments due to financial difficulties.³⁶¹ The third largest BSP is Knoxville, Tennessee-based Knology, which operates in the Southeast. As of June 2002, Knology was the 28th largest MVPD, and had 124,700 video subscribers, a 12% increase over the previous year.³⁶² As with other BSPs, Knology experienced financial troubles in the last year, and filed a pre-packaged Chapter 11 bankruptcy that allows it to continue service uninterrupted.³⁶³ Grande Communications merged with Clearsource, another overbuilder in July 2002, and now has 42 franchises in Texas.³⁶⁴ Western Integrated Networks ("WIN") was serving Sacramento and building its system there, but subsequently suspended its activities in March 2002. It declared bankruptcy and was acquired by SureWest Communications, which plans to continue construction of the system.³⁶⁵

105. In total, BSPA reports that its members serve over one million subscribers. They compete with incumbent cable operators, other MVPDs, and with incumbent LECs and competitive

³⁵⁶ See, e.g., TR Daily, *RCN Corp. in Talks with Bank Lenders, Forecasts Reined-In Business Plan*, Feb. 8, 2002, at <http://www.tr.com/online/trd/2002/td020802/index.html>; Kathy Bergen, *RCN's Cable Future Looks Fuzzy*, CHICAGO TRIBUNE, Mar. 15, 2002, at <http://www.chicagotribune.com/business/chi-0203150373mar15.story?coll=chi%2Dbusiness%2Dhed>; TR Daily, *RCN Amended Bank Lines Tapped Out, But Cash Holdings Still Total \$650M*, Mar. 26, 2002, at <http://www.tr.com/online/trd/2002/td032602/index.html>.

³⁵⁷ RCN, Corp., *RCN Announces Second Quarter 2002 Results* (press release), Aug. 7, 2002.

³⁵⁸ WOW acquired many of its subscribers when it purchased Ameritech New Media's overbuild systems. Ameritech's systems are not technically "BSP systems" because they do not provide a bundle of services. See WOW, *WOW Acquires Ameritech's 310,000 Cable TV Subscribers* (press release), Dec. 3, 2001.

³⁵⁹ Paul Kagan Assoc., Inc., *Top Cable System Operators as of June 2002*, Cable TV Investor, Sept. 30, 2002, at 9-10.

³⁶⁰ For a full list of communities served, see http://www.wideopenwest.com/whatwedo_avail.html.

³⁶¹ CableFAX Daily, *In the States*, Mar. 11, 2002 at 2.

³⁶² Paul Kagan Assoc., Inc., *Top Cable System Operators as of June 2002*, Cable TV Investor, Sept. 30, 2002, at 9-10. See also Knology, Inc., *Knology Reports Growth in Connections, Revenue and EBITDA* (press release), Aug. 12, 2002. According to its web site, Knology serves cities in Alabama, Florida, Georgia, Tennessee, and South Carolina. For a complete list, see <http://www.knology.com/services/cities.cfm>.

³⁶³ Knology, Inc., *Knology Broadband Proceeds with Reorganization; Operations and Customer Service Will Continue Uninterrupted* (press release), Sept. 18, 2002.

³⁶⁴ Grande Communications, Inc., *Grande Communications, ClearSource Close Deal to Become One Company* (press release), July 2, 2002. Currently, the company serves parts of Austin, San Marcos, and San Antonio, Texas; see <http://www.grandecom.com/About/construction.jsp>.

³⁶⁵ SureWest Communications, *SureWest Communications Acquires WINfirst Assets - U.S. Bankruptcy Court Order Issued Wednesday for \$12 Million Acquisition* (news release), July 15, 2002. SureWest owns several telecommunications companies, including the incumbent LEC of a neighboring community, Roseville Telephone. WIN had been awarded a franchise in Los Angeles, and had franchise applications pending in Seattle, Washington; Portland, Oregon; San Francisco and Oakland, California; Las Vegas, Nevada; Phoenix, Arizona; and San Antonio, Austin, Dallas, and Houston, Texas (see 2001 Report, 17 FCC Rcd at 1296), but the SureWest web site makes no mention of building beyond the Sacramento area.

LECs. They have franchises that authorize them to serve over 17 million homes, and have deployed over 32,000 miles of fiber.³⁶⁶

106. *Advanced Services.* BSPs are offering advanced services such as VOD. RCN offers VOD throughout its greater Philadelphia service area.³⁶⁷ In addition to offering SVOD content, Los Angeles-based Altrio Communications is using VOD technology to make voter education information available to residents of Los Angeles County's San Gabriel Valley, including eight information videos on candidates running for Congress and the California Assembly, and on two propositions.³⁶⁸ Astound Broadband, which operates in Concord, California, Treveose, Pennsylvania, and St. Cloud, Minnesota, is deploying WorldGate's ITV service to its digital cable subscribers, one feature of which will be "channel hyperlinking" that allows viewers to interact with television programs by instantly linking to and presenting on the TV related web content.³⁶⁹

107. *OVS.* BSPs, primarily RCN, continue to be 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 OVS for a relatively few number of systems, and others may explore doing so in the future."³⁷⁰ BSPA states that the court's decision in *City of Dallas v. FCC* allowing cities to require local franchises for OVS operators reduces the attractiveness of OVS.³⁷¹ BSPA indicates that members use whatever regulatory regime offers the least resistance to market entry, but that this "is in direct contradiction to the rationale originally underlying the Commission's adoption of the OVS regulations and policies."³⁷²

108. *Competitive Responses.* In the *Notice*, we requested case study information concerning the effects of actual and potential competition in local markets where consumers have a choice among video programming distributors.³⁷³ Typically these choices are among incumbent cable operators, BSPs and other overbuilders, and DBS operators. BSPA described some cases where the incumbent cable operator faces competition from a new entrant.

109. For example, BSPA states that in Washington, D.C., Starpower provides competitive cable, telephone, and high-speed Internet services to 23,780 subscribers.³⁷⁴ BSPA notes that after Starpower entered the market Comcast began providing programming which was previously available only through Starpower. According to BSPA, Comcast has invested \$72 million to upgrade its system,

³⁶⁶ BSPA Comments at iii.

³⁶⁷ RCN, *RCN Launches Video-On-Demand to Its Entire Greater Philadelphia Service Area* (press release), Sept. 17, 2002. See also Matt Stump, *RCN Offers VOD on Comcast's Turf*, *Broadband Week*, Dec. 24, 2001.

³⁶⁸ *Cable Overbuilder, Altrio, Offers Voter VOD Service*, *InteractiveTV Today*, Oct. 28, 2002. See also Altrio Communications, *Altrio Communications Becomes First Competitive Broadband Provider Committed to Deploy Subscription VOD, Chooses StarZ On Demand* (press release), May 30, 2002.

³⁶⁹ Astound Broadband, *Astound Broadband Launches ITV* (press release), Aug. 28, 2002.

³⁷⁰ BSPA Comments at 22. The pace of OVS certification filing has slowed significantly this year. We have received only four in 2002, compared to dozens in previous years. For a complete list of OVS certifications, see <http://www.fcc.gov/mb/ovs/csovsr.html>.

³⁷¹ BSPA Comments at 23. See also *City of Dallas v. FCC*, 165 F.3d 341 (5th Cir. 1999) [No. 96-60502, Jan. 19, 1999].

³⁷² BSPA Comments at 23.

³⁷³ *Notice*, 17 FCC Rcd at 11579.

³⁷⁴ Subscriber counts are for the District of Columbia only. See BSPA Comments at 24.

and has significantly upgraded its customer service.³⁷⁵ BSPA also relates that in Columbus, Ohio, and Louisville, Kentucky, incumbent, Insight began offering advanced services after competition from WideOpenWest and Knology entered the market, and that it now offers VOD on the lowest digital tier, thus improving service offerings to customers.³⁷⁶

110. **Barriers to Competition.** In addition to difficulties with the OVS regime, BSPs report barriers to competition in the MVPD market. First, BSPA alleges that cable operators are engaging in predatory pricing to answer BSP entry, often in secret, thus purportedly thwarting the Commission's uniform rate regulations.³⁷⁷ BSPA also indicates that cable industry trends of horizontal concentration, clustering, and the inapplicability of the Commission's program access rules to terrestrially-delivered programming increase the possibility that cable operators will foreclose access of BSPs to vital programming owned by cable operators, including essential regional programming.³⁷⁸ BSPA contends that "long-term exclusive MDU contracts are pervasive" and that this may interfere with BSPs' ability to obtain necessary economies of scale, "possibly threatening competitive entry into entire geographic markets."³⁷⁹ BSPA also charges that incumbent cable operators are denying BSPs access to essential inputs, such as VOD equipment and contractor services for installation, and have attempted to foreclose access to digital set-top boxes.³⁸⁰

111. BSPA also reports additional problems in delivering programming to subscribers. BSPA indicates that its members are having problems gaining access to utility poles and to public rights of way so that they can build out their systems.³⁸¹ Utilicorp, which is both a BSP and a utility, also reports

³⁷⁵ *Id.*

³⁷⁶ *Id.* at 25-26.

³⁷⁷ *Id.* at 10-11. We reported on complaints of similar practices last year. See 2001 Report, 17 FCC Rcd at 1297. We also have resolved or have cases before us concerning predatory pricing. See *Altrio Communications, Inc. v. Adelpia Communications Corp.*, DA 02-3172 (MB rel. Nov. 15, 2002) (dismissing Altrio's uniform pricing and predatory pricing complaint to the presence of effective competition); and *Everest Midwest License, LLC d/b/a Everest Connections Corporation v. Kansas City Cable Partners d/b/a Time Warner of Kansas City*, CSR 5845 (pending complaint for violation of 47 C.F.R. Section 76.984). Reports of alleged predatory pricing have also been made in the press. See, e.g., Kirk Ladendorf, *Time Warner Cable Discounts Draw Fire From City, Competitor*, AUSTIN AMERICAN-STATESMAN, Feb. 7, 2002, at A-1; Comm. Daily, *Localities Accuse Cable On 'Predatory Pricing' Strategy*, Mar. 4, 2002, at 3-4. Press reports also indicate that the Department of Justice is investigating allegations of incumbent cable operator predatory pricing. See Paul Davidson, *Regulators Scrutinize Cable Costs*, USATODAY, Sept. 23, 2002, at http://www.usatoday.com/money/media/2002-09-22-cable-probe_x.htm. Comcast disputes these charges, and states that it is aware of no evidence of such practices. Comcast Reply Comments at 19-20. See also AT&T Reply Comments at 9; KCCP Reply Comments at 1-2. In addition, RCN raised the same issue in the AT&T-Comcast merger review proceeding. See *AT&T-Comcast Merger Order* fn. 54 *supra* ¶¶ 117-119.

³⁷⁸ BSPA Comments at 11-16. Comcast disputes these facts, stating that overbuilders have been able to gain access to terrestrially-delivered programming, and that there is no evidence of a trend toward migration to terrestrial delivery. Comcast Reply Comments at 21-22. See also NCTA Reply Comments at 7-14; KCCP Reply Comments at 2-3. 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. BSPA Comments at 15-16.

³⁷⁹ BSPA Comments at 16-17. BSPA urges the Commission to prohibit incumbent cable operators from entering into new long-term agreements, and to review existing long-term exclusive agreements. See also ¶¶ 120-122 *infra*.

³⁸⁰ BSPA Comments at 17-19. Comcast states that charges like these have been answered in the record of the AT&T-Comcast merger, and that there is no credible evidence that overbuilders have been unable to hire labor or gain access to technologies. Comcast Reply Comments at 20. See also AT&T Reply Comments at 9.

³⁸¹ BSPA Comments at 20-22. According to BSPA, these difficulties result from intransigence, excessive fees, and slow action on the part of pole owners and local governments.

problems as an entrant in these markets, including difficulties in entering MDUs, gaining access to poles, and gaining access to programming.³⁸²

III. MARKET STRUCTURE AND CONDITIONS AFFECTING COMPETITION

A. Horizontal Issues in the Market for the Delivery of Video Programming

112. 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 July 2001 and June 2002.³⁸³ 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 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.

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

113. The market for the delivery of video programming to households continues to be highly concentrated.³⁸⁴ For most consumers the choices are over-the-air broadcast, cable, two DBS providers, and, in limited cases, an overbuilder or other delivery technology.³⁸⁵ Several commenters point to lack of competition in the MVPD market and argue that true competition in the MVPD market can emerge only when substantial barriers to entry are removed.³⁸⁶ According to commenters, these barriers to entry include: (a) predatory conduct including "predatory pricing"; (b) strategic behavior by an incumbent to raise its rival's costs by limiting the availability of certain popular programming as well as equipment; and (c) local and state level regulations, including delay in gaining access to local public rights-of-way as well as delay in getting cable franchises.³⁸⁷

114. During the past year, DBS has continued to make inroads in the MVPD market. DBS, the major wireless MVPD technology that is available to subscribers nationwide, saw its share of MVPD subscribers increase by two percentage points between June 2001 and June 2002. NCTA contends that competition between cable and DBS is robust and highly viable, and that in many states DBS penetration

³⁸² Utilicorp Comments at 6-10.

³⁸³ See, e.g., *2001 Report*, 17 FCC Rcd at 1298. See also *EchoStar-Hughes HDO* fn. 21 *supra*.

³⁸⁴ See Appendix B, Table B-1. As of June 2002, approximately 77% of MVPD subscribers were served by cable MSOs.

³⁸⁵ Some sources indicate, however, that some percentage of households cannot receive one or both DBS providers due to line of sight issues. For instance, EchoStar reports that, "Estimates are that anywhere from 15% to 30% of the potential subscribers in the Northeast cannot receive EchoStar service due to line of sight issues." *Application of EchoStar Communications Corporation, General Motors Corporation, Hughes Electronics Corporation, Transferors, and EchoStar Communications Corporation, Transferee, For Authority to Transfer Control; Application of EchoStar Satellite Corporation and Hughes Electronics Corporation for Authority to Launch and Operate NEW ECHOSTAR 1 (USABBS-16)*, CS Docket No. 01-348, Amendment to Consolidated Application for Authority to Transfer Control (Nov. 27, 2002) at 13.

³⁸⁶ BSPA Comments at 7-19; DirecTV Comments at 8-11; EchoStar Comments at 4.

³⁸⁷ BSPA Comments at 9; DirecTV Comments at 8-9; EchoStar Comments at 4; Utilicorp at 4-5; Hometown Comments at 1-3; OPASTCO Reply Comments at 3.

exceeds 15%.³⁸⁸ DBS, according to NCTA, has proven to be an enduring competitor to cable by providing an array of exclusive sports programming, advanced and interactive services, and by bundling video and non-video services.³⁸⁹ Anecdotal evidence suggests that competition between cable and DBS is having an effect on cable prices.³⁹⁰ The *2001 Price Survey Report*, using a regression equation, however, indicated that in areas where there is significant DBS penetration, the presence of DBS competition had no statistically significant effect on the demand for cable services or on cable rates.³⁹¹ In a recent study, GAO found that it appears that DBS is able to compete more effectively for subscribers with cable in areas where the DBS companies offer local channels than in areas where the DBS companies do not offer local channels, although this competitiveness had not led to lower cable prices in 2001.³⁹²

115. Relatively small percentages of consumers have a second wireline alternative, such as an overbuild cable system. Of the 33,246 cable community units nationwide, 671, or approximately two percent have been certified by the Commission as having effective competition as a result of consumers having a choice of more than one wireline MVPD. Between June 30, 2001, and June 30, 2002, the Commission granted eight petitions for effective competition, representing 75 communities, based on competitive entry from LECs or their affiliates and DBS providers. The differences between the effect of competition and general market responses based on technological advances, improved marketing, and new service opportunities are not always easy to distinguish. In cases where incumbent cable operators faced competition from a new wireline entrant, however, commenters contend that incumbents have responded to competition by reducing their monthly charge for cable programming services and equipment, by offering additional channels, or by offering Internet and other telecommunications services.³⁹³

116. Several wireless MVPD technologies, other than DBS, provide services that are much smaller in both scope and scale than services provided by an incumbent cable operator. For example, the service area covered by a SMATV system usually covers only a small portion of a cable system's franchise area. MMDS systems, on other hand, often serve larger areas than SMATV service, but offer fewer channels and require line-of-sight for reception. Thus, these services offer consumers alternatives to incumbent cable services only in limited areas.

117. As of June 2002, RCN, which operates a large number of overbuild systems, was offering video service to approximately 506,700 basic subscribers.³⁹⁴ Another wireline overbuilder, WideOpenWest, had 310,000 basic subscribers as of June 2002. BSPA contends that its members provide facilities based broadband including video services to approximately one million subscribers in all major regions other than the Pacific Northwest.³⁹⁵ AT&T contends that it faces competition from BSPs in over 20 markets with approximately 2.2 million subscribers. AT&T further contends that BSPs

³⁸⁸ NCTA Comments at 13.

³⁸⁹ NCTA Comments at 18-19.

³⁹⁰ Peter Grant, *The Cable Guy Cuts His Rates*, WALL STREET JOURNAL, Sept. 25, 2002, at D1.

³⁹¹ *2001 Price Survey Report*, 17 FCC Rcd 6301. Northpoint Technology contends that despite DBS's 18% share, it does not compete with cable in terms of price. See Northpoint Technology Comments at 2; see also DirecTV Comments at 1.

³⁹² *Issues in Providing Cable and Satellite Television*, GAO Report to the Subcommittee on Antitrust, Competition, Business and Consumer Rights, United States Senate, October 2002.

³⁹³ BSPA Comments at 25; Everest and Utilicorp Comments at 4. The *2001 Price Survey Report* also supports this view, 17 FCC Rcd 6301.

³⁹⁴ Kagan World Media, *Top Cable System as of June 2002*, Cable TV Investor, Sept. 30, 2002, at 9-10.

³⁹⁵ BSPA Comments at 5.

will continue to be vigorous competitors because they have received higher rate of customer satisfaction than cable and that BSPs have moved closer to financial stability and are dependent less on venture capital.³⁹⁶

118. *Recent Developments in the MDU Market.* A significant segment of many local MVPD markets is multiple dwelling units ("MDUs"). MDUs are comprised of a wide variety of high-density residential complexes, including high and low-rise rental buildings, condominiums, and cooperatives. Historically, cable and SMATV operators were the primary providers of MVPD services to MDU residents. According to one estimate, 20% to 23% of a cable operator's income comes from MDU subscribers.³⁹⁷ More recently, however, DBS providers have begun to supply programming to operators that serve MDUs and to MDU residents directly.³⁹⁸

119. *Competitive Issues in the MDU Market.* Commenters raise a number of issues that they contend adversely affect their ability to serve the MDU market. These include exclusive contracts, access to MDU inside wiring, and the Commission's over-the-air-reception devices ("OTARD") rules.³⁹⁹

120. *Exclusive and Perpetual Contracts.* Exclusive contracts are those that specify that video service in an MDU will be provided by a particular MVPD and no other. Perpetual contracts are those which grant an MVPD the right to provide service for indefinite or very long periods of time. Some commenters suggest that exclusive and perpetual contracts between incumbent MVPDs and MDU owners represent a barrier to entry in the MDU market.⁴⁰⁰ According to commenters, such contracts often were entered into before the arrival of alternative MVPDs in the MDU market, and the continued existence of these contracts prevents the MDU owners and/or their tenants from having an opportunity to select among competing providers.⁴⁰¹

121. BSPA contends that competitive broadband service providers cannot serve most MDUs because incumbent cable operators have established exclusive agreements with the owners of these MDUs.⁴⁰² BSPA further argues that some BSPs will not enter certain markets where MDUs comprise a significant portion of the franchise due to the exclusionary contracts in place.⁴⁰³ DirecTV argues that MDU residents have limited choices among MVPD providers because exclusive contracts or exclusive "rights of entry" between incumbents and property owners either discourage new entrants or make it impossible for them to enter the market.⁴⁰⁴ DirecTV argues that cable operators are able to thwart competition in the MDU market by resorting to exclusive service contracts or exclusive rights to entry that prohibit MDU property owners or residents from obtaining video programming services from an alternative service provider.⁴⁰⁵ Comcast responds that most of its MDU contracts are exclusive marketing

³⁹⁶ AT&T Comments at 9-10.

³⁹⁷ Larry Kessler, *Good Night, Gorilla Good Morning, Guerilla*. Broadband Properties, March 2001, at 12.

³⁹⁸ DirecTV claims that approximately 20% of its subscribers live in places other than single family homes. See DirecTV Comments, *2001 Report*, at 12. See also ¶ 75 *supra*.

³⁹⁹ BSPA Comments at 16-17; DirecTV Comments at 19; Utilicorp Comments at 6.

⁴⁰⁰ *Id.*

⁴⁰¹ See BSPA Comments at 10-11. See also ¶¶ 78, 110 *supra*.

⁴⁰² BSPA Comments at 16. In particular, BSPA cites a survey conducted by Carolina Broadband that found that at least 90% of all MDU residents living in Charlotte and Raleigh, for example, are prohibited from choosing a competitive wireline competitor due to exclusive agreements between incumbents and MDU owners.

⁴⁰³ BSPA Comments at 17.

⁴⁰⁴ DirecTV Comments at 19.

⁴⁰⁵ *Id.*

agreements, not exclusive access agreements, and that overbuilders enter into the same kind of exclusive arrangements.⁴⁰⁶ NCTA argues that the Commission may not abrogate existing contracts unless it has clear statutory mandate or authorization to do so; and any future restriction on exclusive contracts should apply to all MVPDs on a non-discriminatory basis.⁴⁰⁷ Several parties in the Inside Wiring proceeding suggest that exclusive contracts may represent the only way, because of financial or other requirements, that competitive MVPDs may enter an MDU market and present an alternative to incumbent MVPDs in that market.⁴⁰⁸

122. BSPA and Utilicorp contend that incumbent cable operators also have agreements with "evergreen" provisions, such that they are automatically renewed every time the franchise is renewed.⁴⁰⁹ Since the majority of franchise agreements are renewed automatically, agreements with such provisions are commonly referred to as perpetual contracts. IMCC contends that 30% of all MDU properties in the U.S. fall under perpetual contracts.⁴¹⁰ The Real Access Alliance, representing leading real estate trade organizations, conducted a survey of 4,795 property owners in an effort to gauge the frequency of perpetual contracts.⁴¹¹ The Real Access Alliance found that only 3.8 to 4.8% of MDUs are subject to such contracts today and that none of them were executed within the past five years.

123. *OTARD Rules.*⁴¹² DirecTV asserts that the Commission's OTARD rules should be expanded to cover common areas for MDU residents.⁴¹³ DirecTV states that while the Commission's OTARD rules have encouraged some MDU landlords and owners to use a single dish for reception to prevent "dish clutter," the rule should be extended to common areas so that renters and owners who do not have exclusive use of areas suitable for satellite reception will also be able to receive DBS service.⁴¹⁴

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

124. 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.⁴¹⁵ This market tends to be regional or national since programmers seek to reach

⁴⁰⁶ Comcast Reply Comments at 20.

⁴⁰⁷ NCTA Reply Comments at 15; *See also* KCCP Reply Comments at 2.

⁴⁰⁸ *See* Comments of the Community Associations Institute (December 23, 1997) and the Building and Managers Association International (December 23, 1997) filed in *Telecommunications Services, Inside Wiring, Customer Premises Equipment; Implementation of the Cable Television Consumer Protection and Competition Act of 1992: Cable Home Wiring* ("Inside Wiring proceeding"), 13 FCC Rcd 3659 (1997).

⁴⁰⁹ BSPA Comments at 16; Utilicorp Comments at 6.

⁴¹⁰ Larry Kessler, *One Fish, Two Fish, Red Fish, Blue Fish*, Broadband Properties, April 2002 at 18.

⁴¹¹ The Real Access Alliance submitted the results of its surveys, dated February 1, 2002, of large and small MDUs to the Commission in the Inside Wiring proceeding. The large MDU survey covered a total of 4,795 MDU properties, which represented a total of 1,207,184 units. Of those, only 241 properties, which represented 58,208 units or 4.8% of the total units surveyed were subject to perpetual contracts. The survey of small MDUs covered a total of 74 randomly selected properties. Of those, only two properties, or 3.8%, were subject to perpetual contracts.

⁴¹² 47 C.F.R. § 1.4000.

⁴¹³ DirecTV Comments at 20.

⁴¹⁴ *Id.*

⁴¹⁵ *1998 Report*, 13 FCC Rcd at 24362. 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. *See Implementation of Section 11 of the*

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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).

125. AT&T argues that the Commission should include purchasers of all video programming, and not just multichannel video programming, when considering the market for the purchase of video programming.⁴¹⁶ AT&T argues that broadcast stations and networks compete with MVPDs in the program purchase market as well as in the advertising and program distribution markets. The Commission is currently considering these issues in its rulemaking concerning cable horizontal and vertical limits.⁴¹⁷

a. The Regional Programming Market

126. For the past several years, 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.

127. *Competitive Issues Related to Clustering.* AT&T contends that clustering of cable systems can create greater economies of scale and scope, and enable cable operators to offer a wider variety of broadband services at lower prices to customers. In addition, AT&T contends that clustering enables cable operators to: (a) spread costs over a number of systems and a larger subscriber base; (b) deliver a higher quality of signal to consumers; (c) offer more local and regional programming for consumers; (d) provide better customer service and fewer outages; (e) create more efficient interconnections that enhance educational and governmental uses; (f) develop more attractive joint consumer promotions and discounts with area retailers and others; and (g) increase advertising revenues, which can, in turn, be used to offset a portion of programming and system upgrade expenses.⁴¹⁸

128. Several commenters assert harmful effects of clustering and regional concentration on program distribution with regard to vertically-integrated incumbent cable operators.⁴¹⁹ Specifically, these commenters contend that cable operators have "migrated" programming, and will to a greater extent in the future, migrate programming from satellite delivery to terrestrial (fiber optic) delivery because only satellite-delivered programming is subject to the program access rules.⁴²⁰ These commenters contend that a vertically-integrated incumbent may be able to prevent competitors from gaining access to certain

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Cable Television Consumer Protection and Competition Act of 1992, Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996, the Commission's Cable Horizontal and Vertical Ownership Limits and Attribution Rules, Review of the Commission's Regulations Governing Attribution of Broadcast and Cable/MDS Interests, Review of the Commission's Regulations and Policies Affecting Investment in the Broadcast Industry, Reexamination of the Commission's Cross-Interest Policy ("Cable Ownership Notice"), 16 FCC Rcd at 17312 (2001). 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.

⁴¹⁶ AT&T Comments at 10-11.

⁴¹⁷ See *Cable Ownership Notice*, 17 FCC Rcd at 17326-7.

⁴¹⁸ AT&T Comments at 14-17.

⁴¹⁹ BSPA Comments at 14-15; DirecTV Comments at 10-11; EchoStar Comments at 9-11; SBCA Comments at 17.

⁴²⁰ *Id.*

programming because it is terrestrially delivered.⁴²¹ NCTA replies that DBS, at least, is large enough to negotiate for carriage of virtually all satellite-delivered networks and that DBS has its own exclusive arrangements for programming.⁴²² NCTA also states that requiring sharing of all cable-owned programming with competitors would remove incentives to invest in and to create such programming.⁴²³

129. **System Mergers and Acquisitions.** The most important merger of the past year was that of the largest MSO, AT&T, with the third largest MSO, Comcast.⁴²⁴ No other large cable mergers occurred or were proposed over the past year. Between July 2001 and June 2002, a total of 28 transactions were announced having an aggregate value of approximately \$73.3 billion and involving 14.3 million subscribers.⁴²⁵ Removing the AT&T-Comcast deal, the aggregate value of the remaining deals was only \$1.2 billion, and involved only 500,000 subscribers.⁴²⁶ In addition, the price per subscriber in these deals dropped dramatically.⁴²⁷ At the end of 2001, there were 107 clusters with approximately 52 million subscribers compared to 108 clusters and approximately 54 million subscribers at the end of 2000. In the largest cluster size category (over 500,000 subscribers), the number of clusters decreased between 2000 and 2001, from 34 to 32, and the number of subscribers in these clusters decreased also.⁴²⁸

130. **System Trades.** Very little system trading, or swapping, occurred in the last year. Between the July 2001 and the end of 2001, none occurred.⁴²⁹ In 2002, three swaps have occurred, between Mediacom and U.S. Cable Corp., between Insight and AT&T,⁴³⁰ and between CableOne and Time Warner.⁴³¹

b. The National Programming Market

131. **Concentration Among Buyers of National Video Programming.** Cable operators still are the primary purchasers of multichannel video programming targeted to a national audience. Cable

⁴²¹ DirecTV, for example, notes that it cannot carry Comcast SportsNet in Philadelphia because Comcast has denied access to it. DirecTV Comments at 15. Utilicom states that it cannot carry Metro Sports, a Kansas City-area sports network, because its owner, Kansas City Cable Partners, refuses to allow Utilicom access. Utilicom Comments at 9. AT&T replies that only three out of 24 vertically-integrated regional sports networks have been distributed terrestrially, so there is no basis for extending program access rules to terrestrially-delivered programming. AT&T Reply Comments at 8-9. See also Cablevision Reply Comments at 6-7; Comcast Reply Comments at 22.

⁴²² For example, NCTA cites DirecTV's NFL "Sunday Ticket" football package. NCTA Comments at 16. AT&T states that there is no evidence that cable operators have used clusters to act anti-competitively. AT&T Comments at 18-19.

⁴²³ NCTA Reply Comments at 7.

⁴²⁴ See *AT&T-Comcast Merger Order* fn. 54 *supra*.

⁴²⁵ Kagan World Media, *Cable System Sales Summary*, Cable TV Investor, August 29, 2001, at 8; January 25, 2002, at 11; and August 29, 2002, at 8.

⁴²⁶ When announced, the AT&T-Comcast deal involved 13.8 million subscribers at a value of more than \$71 billion.

⁴²⁷ *Id.*

⁴²⁸ See Appendix B, Table B-2.

⁴²⁹ Kagan World Media, *Cable System Exchanges 2001*, Broadband Cable Financial Databook 2002, July 2002, at 181

⁴³⁰ Kagan World Media, *Announced/Proposed Cable System Sales*, Cable TV Investor, July 18, 2002, at 7; Oct. 31, 2002 at 9.

⁴³¹ *Mass Media*, Comm. Daily, Nov. 15, 2002, at 13.

operators served approximately 76.5% of MVPD subscribers.⁴³² 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 11.38% in 2001 to 11.99% in 2002. Similarly, EchoStar's share increased from 6.87% in 2001 to 8.3% in 2002.⁴³³

132. Continuing a recent trend, the share of subscribers of the top four MVPDs has declined slightly over the past year.⁴³⁴ In 2001, the four MVPDs with the largest subscribership served 51.68% of all MVPD subscribers.⁴³⁵ In 2002, the top four MVPDs served 50.48% of all MVPD subscribers nationwide.⁴³⁶ However, the share of subscribers served by the top ten MVPDs increased slightly from 84.29% in 2001 to 84.44% in 2002.

133. 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").⁴³⁷ We use the reported MVPD subscriber shares to calculate HHI figures.⁴³⁸ The HHI for the national market for purchase of programming is 884 – considered "unconcentrated" under the Merger Guidelines.⁴³⁹ Since the larger

⁴³² See Appendix B, Table B-1. This year, NCTA submitted a statement by Dr. Debra J. Aron regarding cable market share and its relationship with market power. NCTA and Dr. Aron state that to focus on market shares is simply wrong and that what determines market power is the extent to which competitive alternatives are available or poised to be available, to which customers could turn if the firm attempted to raise price. NCTA maintains that it is the availability of competitive alternatives, not a competitor's current market share, which is relevant to assessing competition. NCTA Comments at 7. See also AT&T Reply Comments at 5-7; Comcast Reply Comments at 7; NCTA Reply Comments at 6-7. Dr. Aron argues that high rates of growth in prices do not in general create an economic inference of market power and that market share is not determinative of market power, and is not even the primary determinant. NCTA Comments, Statement of Dr. Aron at ¶¶ 7-8 and ¶¶ 25-26. In reply, EchoStar argues that Dr. Aron's analysis is based on a false premise. It contends that DBS has not constrained cable prices and that cable price increases are not simple cost pass-throughs, consistent with economic theory that suggests that the extent to which cost increases are passed on is directly related to the degree of market power present. See EchoStar Reply Comments at 2-4.

⁴³³ DirecTV is the third largest MVPD with 10,775,000 million subscribers; EchoStar is the fifth largest MVPD with 7,465,000 million subscribers. See <http://www.sbca.com/mediaguide/factsfigures.htm> (visited Oct. 16, 2002). See also ¶¶ 58-59 *supra*.

⁴³⁴ The top four MVPD purchasers of video programming for distribution to the households or the MDU market are AT&T (with a share of 14.75% of all MVPD subscribers), Time Warner (with a share of 14.29%), DirecTV (with a share of 11.99%), and Comcast (with a share of 9.46%). These percentages are derived from publicly-available data and are not the result of application of the Commission's attribution rules.

⁴³⁵ 2001 Report, 17 FCC Rcd at 1341, Appendix C, Table C-3.

⁴³⁶ See *id.* at 1341-1343, Appendix B, Tables C-3 and C-4.

⁴³⁷ 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.

⁴³⁸ 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.

⁴³⁹ 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

(continued...)

firms in the calculation are more equal in size, the HHI for 2002 is 21 points lower than the HHI of 905 reported last year.

B. Vertical Integration and Other Programming Issues

1. Status of Vertical Integration

134. Vertical integration occurs where a video programming distributor has an ownership interest in a video programming supplier or vice versa. These vertical relationships may have beneficial effects,⁴⁴⁰ or they may deter competitive entry in the video marketplace and/or limit the diversity of programming.⁴⁴¹ Since our last *Report*, the total number of national programming networks has increased and cable operators continue to consolidate and develop new ownership interests. The proportion of vertically-integrated networks, however, has decreased since last year. In 2002, there were 308 satellite-delivered national programming networks, an increase of 21 networks since 2001.⁴⁴² Of the 308 networks, 92 networks, representing approximately 30%, were vertically integrated with at least one cable MSO.⁴⁴³ Last year, we reported the proportion of vertically-integrated networks as 35%.⁴⁴⁴

135. Four of the top six cable MSOs hold ownership interests in satellite-delivered national programming networks.⁴⁴⁵ One or more of these companies has an interest in 79 of the 92 vertically integrated national satellite-delivered programming networks.⁴⁴⁶ These four companies are AOL Time

(...continued from previous page)

HHI above 1800 as "highly concentrated." See *1998 Report*, 13 FCC Rcd at 24363. None of the calculations above include the AT&T-Comcast Merger, which was completed after June, 30, 2002, which is the date we use.

⁴⁴⁰ 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).

⁴⁴¹ See *1995 Report*, 11 FCC Rcd at 2135; *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992 Vertical Ownership Limits*, MM Docket 92-264, 10 FCC Rcd 7364, 7365 (1995).

⁴⁴² In our last report, we counted 294 satellite delivered national programming networks. We overstated that number by seven networks, double counting between the Starz! and Encore channels. See *2001 Report*, 17 FCC Rcd at 1345, 1346.

⁴⁴³ 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.

⁴⁴⁴ If we had not overstated our count of satellite-delivered national programming networks in our last report, 34% of the networks would have been vertically integrated.

⁴⁴⁵ We derive our information concerning vertically-integrated networks from various sources, such as NCTA 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 so complex. For example, our tables do not reflect that Vulcan Programming, Inc., an entity controlled by Mr. Paul Allen, owns approximately 31% of Oxygen Network. We also note, as an example, that Liberty holds an attributable interest in News Corporation, which is the owner of cable networks operated by the Fox Cable Networks Group and Fox News Channel. In addition, we note that Charter Holding Company will receive unregistered shares of Oxygen Media common stock on, or prior to, February 2, 2005. Mr. William Savoy, a director of Charter and Charter Holding Company sits on Oxygen Network's board of directors.

⁴⁴⁶ The top six MSOs are AOL Time Warner, Comcast Cable Communications, Charter Communications, Cox Communications, Adelphia Communications, and Cablevision Systems. See NCTA, *Industry Overview*, Cable Developments 2002, at 9. We have combined the programming interests of AT&T Broadband and Comcast because AT&T Broadband combined with Comcast Corporation on Nov. 18, 2002. See Ted Hearn and Mike Farrell, *Cleared for Takeoff, Comcast Seals Cable's Biggest Merger*, Multichannel News, Nov. 18 at 1.

Warner, which has interests in 39, or 13% of all national programming networks; Cox, which has an ownership interest in 25, or 8% of all national programming networks; Comcast which has ownership interests in nine programming networks, which account for 3% of all national programming networks, and Cablevision, through its programming subsidiary, Rainbow Media, which owns five national programming networks, or 2% of all national programming networks. Liberty Media is the only other cable operator that owns national programming networks.⁴⁴⁷ It has interests in 41 national networks, or 13% of all national programming networks.⁴⁴⁸

136. Vertical integration is not only associated with the largest cable system operators, but also the programming networks with the largest number of subscribers. Currently, eight of the top 20 video programming networks (ranked by subscribership) are vertically integrated with a cable MSO. This figure represents a slight increase from 2001 when seven of the top 20 networks were vertically integrated.⁴⁴⁹ Additionally, it appears that a significant amount of video programming is controlled by 14 companies, including cable MSOs, broadcasters, and other media entities.⁴⁵⁰ Almost all (*i.e.*, 18) of the top 20 programming networks in terms of subscribership are owned by one or more of these 14 companies, with nine of these networks vertically integrated with cable MSOs.⁴⁵¹

137. This year, we found 60 programming services that have been planned but are not yet operational, a 17% increase from the *2001 Report's* count of 51 planned services.⁴⁵² 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.

2. Other Programming Issues

138. 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.⁴⁵³ 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. We also requested information about: local and regional channels, including sports and news services; public,

⁴⁴⁷ 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 rules. 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.

⁴⁴⁸ If we did not count Liberty Media as being vertically integrated, the ratio of vertically integrated channels would decrease from 34% in 2001 to 20.6% in 2002. See Appendix C., Table C-5.

⁴⁴⁹ Appendix C, Table C-6. See also *2001 Report*, 17 FCC Rcd at 1310.

⁴⁵⁰ The 14 companies are: AOL Time Warner, Cablevision, Comcast, Cox, Disney, E. W. Scripps Co., General Electric, Hearst, Liberty Media, MGM, Newhouse, News Corp., Viacom, and Vivendi. See Kagan World Media, *Major Owners of Cable Networks: Sept. 2001*, Cable Program Investor, Sept. 11, 2001, at 4.

⁴⁵¹ C-SPAN, C-SPAN2, WGN, and the Weather Channel are the four unaffiliated programming networks among the top 50 programming networks. Cable affiliates provide 95% of the funding for, but have no ownership or program control interests in C-SPAN and C-SPAN2. DBS licensees provide the other 5% of funding, and also have no ownership or program control interests. None of the 14 companies listed in footnote 450 *supra* have any ownership interest in WGN or the Weather Channel. See Kagan World Media, *Network Census: July 30*, Cable Program Investor, Sept. 11, 2001, at 10.

⁴⁵² See Appendix C, Table C-4. See also *2001 Report*, 17 FCC Rcd at 1311.

⁴⁵³ See *Notice*, 17 FCC Rcd at 11582-11584.

educational and governmental ("PEG") access channels; leased access programming; compliance with the DBS public interest programming obligations; packaging of programming services; programming costs; closed captioning and video description; and electronic programming guides ("EPGs").

139. *Regulatory Issues Relating to 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.⁴⁵⁴ 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 with vertically integrated-programming vendors. The Commission has concluded that the statutory access requirements apply only to satellite-delivered and not to terrestrially-delivered programming.⁴⁵⁵

140. 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.⁴⁵⁶ In the same proceeding, the Commission concluded that the language of section 628(c) expressly applies to satellite programming, and that terrestrially-delivered programming is not covered.⁴⁵⁷

141. Cable's competitors, including BSPA, DirecTV, and EchoStar, suggest that the program access rules should be broadened to include terrestrially-delivered programming.⁴⁵⁸ Several commenters maintain that, despite the presence of the program access rules, lack of access to programming, especially sports programming, remains a significant barrier to entry and an impediment to the successful development of a competitive MVPD business.⁴⁵⁹ EchoStar maintains that terrestrially-delivered programming is bound to increase while demand for local and regional programming, which cable operators tend to withhold from DBS, will also increase.⁴⁶⁰

⁴⁵⁴ 47 U.S.C. § 548.

⁴⁵⁵ *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 (1998).

⁴⁵⁶ *Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Development of Competition and Diversity in Video Programming Distribution: Section 628(c)(5) of the Communications Act*, 17 FCC Rcd 12124 (2002).

⁴⁵⁷ *Id.* at 12158.

⁴⁵⁸ BSPA Comments at 13; DirecTV Comments at 10; EchoStar Comments at 11.

⁴⁵⁹ Utilicorp Comments at 9; SBCA Comments at 17-18.

⁴⁶⁰ EchoStar Comments at 10-11.

142. DirecTV expresses concern about the Commission's failure to apply the program access rules to programming that was formerly delivered by satellite and subsequently was migrated to terrestrial delivery. It also maintains that technological advances, which have lessened the costs of developing terrestrially-delivered programming, combined with clustering, have made terrestrial distribution of programming a much more viable method for delivery of both national and regional programming.⁴⁶¹ It urges the Commission to carefully monitor the effects of terrestrial distribution of vertically-integrated programming by cable operators.⁴⁶²

143. Cable operators are opposed to the extension of the program access rules to include terrestrially-delivered programming. Comcast states that consumers in its service areas have at least two and sometimes three or more additional choices of MVPD. It maintains that competition is so robust that cable companies must develop and deploy new technologies to support new services or lose their subscribers to competitors.⁴⁶³ Comcast also disputes BSPA's claims that incumbent cable operators have both the opportunity and the incentive to refuse their terrestrially-delivered programs to competitors. Comcast states that it has always made Comcast Sports Net available to overbuilders, and points out that RCN has carried Comcast SportsNet since it was launched.⁴⁶⁴ AT&T takes issue with DirecTV's allegation that incumbent cable operators have begun to use terrestrial delivery in order to insulate themselves from the program access requirements.⁴⁶⁵ NCTA denies EchoStar's assertion that there is a "terrestrial loophole" in the program access statute. It states that Congress never intended to require cable operators to share all programming with competitors and deliberately limited the access requirement to satellite-delivered programming.⁴⁶⁶

144. Pursuant to section 613(f) of the Communications Act,⁴⁶⁷ the Commission also adopted channel occupancy rules that restricted the number of channels on a cable system that may be occupied by programmers affiliated with the owner of the system.⁴⁶⁸ On March 3, 2001, the United States Court of Appeals for the D.C. Circuit reversed and remanded Commission's channel occupancy limits.⁴⁶⁹ The Commission has sought and received comment on, among other things, how changes in the MVPD market and in the level of vertical integration for cable MVPDs may have affected MSOs' ability to favor affiliated over unaffiliated programming.⁴⁷⁰

145. **Sports Programming.** Regional sports programming continues to be an important segment of programming for all MVPDs. According to many commenters, local and regional programming holds high value for subscribers.⁴⁷¹ Of the 86 regional cable channels counted in this year's report, 31, or 36%, are sports channels.⁴⁷² The most widely distributed sports programming network, ESPN, which is owned by Disney, reaches almost 86 million television households through a variety of

⁴⁶¹ DirecTV Comments at 10.

⁴⁶² *Id.* at 11.

⁴⁶³ Comcast Comments at 9.

⁴⁶⁴ Comcast Reply Comments at 22.

⁴⁶⁵ AT&T Reply Comments at 8.

⁴⁶⁶ NCTA Reply Comments at 7.

⁴⁶⁷ Section 613(f) was added to the Communications Act as part of the 1992 Cable Act. 47 U.S.C. § 533(f).

⁴⁶⁸ 47 C.F.R. § 76.504. See 1994 Report, 9 FCC Rcd at 7521.

⁴⁶⁹ *Time Warner Entertainment Co. v. FCC*, 240 F.3d 1126 (D.C. Cir.2001).

⁴⁷⁰ See *Cable Ownership Notice*, fn. 415 *supra*.

⁴⁷¹ BSPA Comments at 14; EchoStar Comments at 10-11; Utilicorp Comments at 9-10; Hometown Comments at 1.

⁴⁷² See Appendix C, Table C-3.

MVPD technologies. While ESPN dominates national sports programming, regional sports distribution is dominated by Fox Sports Net, which owns 60% (18 of 30) of all regional sports networks. Fox Sports Net, jointly owned by News Corp. and Cablevision, reaches 50 million television households.⁴⁷³

146. EchoStar asserts that regional sports programming is the type of programming that cable operators tend to withhold from DBS operators.⁴⁷⁴ Commenters note that vertically integrated entities may have an incentive to shift regional sports networks from satellite to terrestrial distribution and thereby evade the program access rules.⁴⁷⁵ In addition, BSPA alleges that when a regional sports network is not vertically integrated, a video programming distributor may enter into an exclusive contract with the program provider, which deprives rivals of the programming.⁴⁷⁶

147. DirecTV lists 24 regional sports networks (including 18 Fox sports networks) that are carried on its system.⁴⁷⁷ DirecTV carries regional sports networks in every regional sports market except Philadelphia, where it was refused access to Comcast's SportsNet.⁴⁷⁸ Cablevision notes that DBS providers promote the advantages of their own exclusive sports programming and report to analysts that it is because of this advantage that cable's market share is declining.⁴⁷⁹

148. **News Programming.** Local news channels have been on cable since at least 1986, when Cablevision launched News 12 Long Island. This year, of the 86 regional programming networks counted, 37% (32 networks) are regional news networks. Unlike sports programming, regional and local news networks have a more diverse ownership. Some regional news networks are vertically integrated with cable MSOs, but many are not.⁴⁸⁰

149. Most regional news networks cover a single city or other limited geographic market, or subsections of that market. There are at least seven local news networks in separate sections of the New York City area.⁴⁸¹ A handful of regional news networks, however, have elected to broaden their coverage. Statewide news channels are operating in Florida, Massachusetts, Texas, and Ohio. New England Cable News ("NECN") is the most widely distributed regional news network. NECN reaches more than 2.7 million households, approximately 69% of cable homes in the six-state region it serves.

⁴⁷³ NCTA, *Regional Cable Networks*, Cable Developments 2002, at 171-194.

⁴⁷⁴ EchoStar Comments at 10-11.

⁴⁷⁵ DirecTV Comments at 10; EchoStar Comments at 10-11; SBCA Comments at 17; BSPA Comments at 15.

⁴⁷⁶ BSPA Comments at 15.

⁴⁷⁷ DirecTV Comments at 14.

⁴⁷⁸ *Id.* at 15. See also *Application for Review of Orders of the Cable Services Bureau Denying Program Access Complaints*, 15 FCC Rcd at 22802 (CSB 2000). This Order consolidates several proceedings involving Comcast, DirecTV, and EchoStar. In separate proceedings, DirecTV and EchoStar filed program access complaints alleging that Comcast violated sections 628(b) and (c) of the Communications Act and the Commission's regulations by engaging in discrimination and unfair practices in the distribution of satellite cable programming. The Cable Services Bureau denied the complaints. Subsequently, DirecTV and EchoStar each requested Commission review; the Commission consolidated the proceedings and denied the applications for review. EchoStar appealed the Commission's decision and in *EchoStar Communications Corporation v Federal Communications Commission and the United States of America*, No. 01-1032, 2002 (D.C. Cir. Jun. 11, 2002) the court upheld the Commission's decision.

⁴⁷⁹ Cablevision Comments at 7.

⁴⁸⁰ Cablevision, the seventh largest MSO, owns news networks, including MSG Metro Traffic and Weather in New York and the News 12 group of regional news services in Connecticut, New Jersey, and Westchester County and Long Island, New York. See also Appendix C, Table C-3.

⁴⁸¹ Appendix C, Table C-3.

150. **Other Programming.** In the *Notice*, we sought information regarding public, educational and government (“PEG”) channels, leased access programming, and programming provided by DBS operators in compliance with the public interest programming obligations.⁴⁸² 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.⁴⁸³ Approximately 15% of all cable systems carry PEG programming.⁴⁸⁴ Larger cable systems tend to have PEG channels so that the percentage of subscribers that receive PEG channels is much higher than the percentage of systems providing PEG channels. 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. Comcast reports that all of its systems carry PEG and/or leased access programming. Comcast states that about 2.7% of its channel capacity is devoted to local and federal requirements, not counting must-carry. If it includes digital channels, about 1.1% of total channels is devoted to local and federal requirements.⁴⁸⁵

151. DBS operators are required to reserve four percent of their channel capacity for “noncommercial programming of an educational or informational nature.”⁴⁸⁶ DirecTV states that it currently carries 11 channels pursuant to this requirement as well as additional educational channels that it does not include as part of its compliance with the rules.⁴⁸⁷ EchoStar states that it currently carries 21 channels pursuant to this requirement, as well as additional educational channels that it does not include as part of its compliance with the rules.⁴⁸⁸ DBS providers are charging some noncommercial programmers for carriage on their systems to the extent allowed by the Commission’s rules.⁴⁸⁹

152. **Packaging of Cable Programming Services.** In the *Notice*, we sought information on whether cable operators are changing the way they package programming. We sought comment on the extent to which cable operators are restructuring their programming tiers to offer lifeline tiers and how many customers subscribe only to the lifeline tier. We asked if operators are shifting services to create uniform program offerings across regions or clusters. We also asked if cable operators are restructuring their programming tiers as a result of actual or potential competition and if such restructuring is intended to differentiate cable service from other MVPD services.⁴⁹⁰

⁴⁸² *Notice*, 17 FCC Rcd at 11583.

⁴⁸³ 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).

⁴⁸⁴ <http://www.alliancecm.org/about/info.htm>. PEG channels are intended to provide community-specific information, such as bulletin boards for local activities, local civic meetings, and local governmental activities. In addition to PEG channels, some cable operators are also providing local and regional sports, weather, and news programming.

⁴⁸⁵ Comcast Reply Comments at 7 n.22.

⁴⁸⁶ *See Implementation of Section 25 of the Cable Television and Consume Protection Act of 1992, Direct Broadcast Satellite Public Interest Obligations*, 13 FCC Rcd 23254 (1998).

⁴⁸⁷ This programming includes C-SPAN, Trinity Broadcasting Network, PBS Lifelong Learning, WorldLink TV, Eternal Word Television Network, Clara+Vision, Inspirational Life, NASA-TV, RFD-TV, The Word, and BYU-TV. It does not count C-SPAN2 or the PBS KIDS channel towards this obligation. DirecTV Comments at 15.

⁴⁸⁸ Letter from David R. Goodfriend, Director, Legal and Business Affairs, EchoStar Satellite Corporation, to W. Kenneth Ferree, Chief, Media Bureau, FCC (Nov. 19, 2002).

⁴⁸⁹ Under our 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).

⁴⁹⁰ *Notice*, 17 FCC Rcd at 11582.

153. Comcast states that over 95% of its cable systems have been upgraded to two-way, digital communications. It says that its digital services have been exceptionally successful. Comcast also relates that it can now offer its customers an array of video content designed to meet virtually every identified viewing interest.⁴⁹¹ It maintains that VOD functionality will further stimulate the demand for digital services, and provides subscribers with even more control over their viewing choices.⁴⁹²

154. According to NCTA, digital cable has moved beyond the introductory phase and is now a permanent fixture in many households. The expanded capacity made possible by digital compression technology has enabled programmers to launch more than 90 digital channels, offering a wide range of genres, including sports, music, movies, children's, family, and foreign language programming.⁴⁹³ Digital services may be packaged as stand-alone packages of digital video channels, or in combination with pay-per-view and VOD. NCTA states that most cable systems offer a choice of two to four analog and digital tiers of video programming consisting of broadcast and satellite-delivered networks. They also offer multiple packages of premium service and four or more pay-per-view networks.⁴⁹⁴ The transition from pure analog systems to combination analog-digital systems has resulted in some repackaging and re-tiering of services to provide more options for customers, e.g., AT&T Broadband modified its digital tiers by reconfiguring its digital packages to add more non-premium programming for subscribers who do not want digital services.⁴⁹⁵

155. The 1992 Cable Act generally prohibits cable operators from requiring subscribers to purchase a particular service tier, other than the basic service tier, in order to obtain access to video programming offered on a per-channel or per-program basis.⁴⁹⁶ Cable systems that lack addressable set top boxes, or are restricted by other technological limitations, were afforded a ten-year grace period to come into compliance with the "tier buy-through requirement."⁴⁹⁷ As of October 5, 2002, cable operators are no longer able to require subscribers to purchase cable programming service tiers in order to access premium or pay-per-view channels because of lack of equipment or technological limitations. In the absence of effective competition or a waiver, all cable operators are now subject to this "tier buy-through" prohibition.

156. **Programming Costs.** The Commission's most recent report on cable industry prices ("*2001 Price Survey Report*") asked cable operators to describe factors that led to changes in their rates. Competitive and noncompetitive cable operators attributed 50.7% and 46.1%, respectively, of their rate increases to increases in programming costs.⁴⁹⁸ NCTA states that cable network programming

⁴⁹¹ Comcast Comments at 3-4.

⁴⁹² *Id.* at 5.

⁴⁹³ NCTA Comments at 29.

⁴⁹⁴ *Id.* at 30.

⁴⁹⁵ *Id.* at 31.

⁴⁹⁶ Some "per channel" services are offered on a "multiplexed" basis. That is, the subscriber receives essentially the same programming repeated on several channels on a different time schedule. For rate regulation purposes, Congress has indicated that such multiplexed services are to be treated as if a single channel service were involved. H.R. Rep. No. 628, 102d. Cong., 2d Sess. 80 (1992) ("The Committee intends for these 'multiplexed' premium services to be exempt from rate regulation to the same extent as traditional single channel premium services when they are offered as a separate tier or as a stand-alone purchase option.") The Commission has indicated that the same treatment would be appropriate for purposes of the tier buy-through prohibition. See *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992*, 8 FCC Rcd 2274, n.9 (1993).

⁴⁹⁷ *Reminder of Tier Buy-Through Requirements for Cable Operators*, 16 FCC Rcd 17728 (MB 2001).

⁴⁹⁸ Inflation, channel additions, and system upgrades, were also said to account for a large portion of rate increases. See *2001 Price Survey Report*, 17 FCC Rcd at 6311.

expenditures have increased. It also indicates that the cable industry is purchasing higher quality programming. NCTA also notes that there has been a phenomenal growth in programming networks.⁴⁹⁹ It is unclear from NCTA's comments whether the increased expenditures are the result of higher quality programming, increased programming purchases, or an increase in the price of individual programming networks.⁵⁰⁰

157. *Closed Captioning and Video Description.* In the *Notice*, we sought information regarding video programming providers' experiences offering closed captioning and video description.⁵⁰¹ In August of 2000, the Commission adopted rules requiring certain larger broadcasters and video programming distributors to provide "video descriptions" for some of their programming. Video descriptions are descriptions of key visual elements in a television program, inserted into the natural pauses in the program's audio, distributed in the program's second audio channel. These descriptions are intended to make television programming more accessible to people who are blind or visually impaired.⁵⁰² ABC, CBS, Fox, NBC, PBS, as well as the top five cable networks, Lifetime, Nickelodeon, TBS, TNT, and USA network, and Turner Classic Movies, among others, have been providing described programming either on their own or pursuant to these rules. Described programs include, for example, CSI: Crime Scene Investigation on CBS, Boston Public on Fox, Law & Order on TNT, Lifetime movies, television premieres of theatrical films and specials on ABC and USA Network, and Rugrats and Blues Clues on Nickelodeon.⁵⁰³ Video descriptions are also made available on DVD versions of some feature films. On November 8, 2002, the U.S. Court of Appeals for the D.C. Circuit vacated the Commission's video description rules finding that they exceeded the Commission's authority.⁵⁰⁴

158. Closed captioning requirements also exist and are specifically provided for in the Communications Act.⁵⁰⁵ Among the parties commenting in this proceeding, DirecTV states that it provides closed captioning on every channel that notifies it that it carries closed captioning.⁵⁰⁶ DirecTV states that it has 46 local channels for which it has added the Second Audio Program channel to carry video description. Comcast reports that it is in full compliance with the closed captioning and video description rules.⁵⁰⁷ It notes that its programming agreements require programmers to meet or exceed the Commission's requirements and that each programmer must provide it with quarterly certifications demonstrating that it is complying with the rules. During 2002, Discovery Communications discovered that it had failed to close caption the number of hours of programming it was required to provide pursuant to contracts with its programming distributors on four of its cable networks. This was, in part, a consequence of the rescheduling of already captioned programs. Discovery took steps to both make up

⁴⁹⁹ NCTA Comments at 37.

⁵⁰⁰ According to Kagan World Media, programming expenses have increased from \$7.2 billion in 2001 to \$7.9 billion in 2002. See *Economics of Basic Cable Networks 2002* at 433.

⁵⁰¹ *Notice*, 17 FCC Rcd at 11584.

⁵⁰² See *Video Description of Video Programming*, 15 FCC Rcd 15230 (2000).

⁵⁰³ See e.g. www.washear.org/dailylogs.htm.

⁵⁰⁴ *Motion Picture Association of America v. FCC*, 2002 WL 31487186 (2002).

⁵⁰⁵ 47 U.S.C § 613.

⁵⁰⁶ DirecTV Comments at 15. DirecTV argues that it faces ever-increasing regulatory burdens on its system capacity. It mentions that it now must provide video description services for certain programming along with closed captioning, comply with political broadcasting rules, and set aside four percent of its channel capacity for noncommercial programming of an educational or informational nature. *Id.* at 8-9.

⁵⁰⁷ Comcast Reply Comments at 7 n.22.

the captioning shortfall for each channel and to substantially exceed the captioning requirements in the subsequent quarter.⁵⁰⁸

159. *Electronic Programming Guides.* Several commenters report on the use of EPGs.⁵⁰⁹ Gemstar provides two different EPGs – Guide Plus+ and TV Guide Interactive.⁵¹⁰ Guide Plus+ is available to all television viewers, whether or not they subscribe to an MVPD because it is transmitted over the vertical blanking interval (“VBI”) of at least one broadcast station in most markets. A consumer needs a TV receiver that contains the hardware and software needed to receive and interact with this guide. Several TV manufacturers include this technology in their TV receivers and about seven million such TVs have been purchased.⁵¹¹ Gemstar’s provides its second EPG, TV Guide Interactive, to MVPDs using satellite distribution. Cable operators marketing TV Guide Interactive, often under their own brand name, generally make it available only to digital tier subscribers.⁵¹² Gemstar also licenses its technology to competing EPGs, including Ultimate TV and AOL TV. Gemstar’s revenues are generated through advertising and license fees from manufacturers and others using its technology.⁵¹³

160. Comcast reports that it has entered into a long-term agreement with Gemstar to provide EPGs to a majority of its subscribers. It also uses TVGateway, a joint venture of Comcast and other cable operators, on several systems, including Mobile, Alabama, and Lower Merion and Willow Grove, Pennsylvania.⁵¹⁴ DirecTV states that all of its subscribers receive a fully interactive EPG, which is produced nationally but can be locally customized.⁵¹⁵ DirecTV’s EPG was developed by and is owned by the company and is specific to its technology. DirecTV does not charge for its EPG, nor is it supported by advertising.⁵¹⁶ Utilicorp states that it currently offers two different EPGs to its subscribers.⁵¹⁷

161. Gemstar further addresses regulatory issues related to EPGs and requests that the Commission adopt a policy that will promote a competitive EPG market.⁵¹⁸ It argues that incumbent cable operators have the ability and incentive to discriminate against unaffiliated EPGs in favor of their own services. As it stated in its comments in the ITV proceeding, Gemstar urges the adoption of rules that prohibit discrimination by MVPDs against unaffiliated EPGs or the stripping of EPGs carried on the VBI of broadcast stations.⁵¹⁹ Moreover, it contends that a Commission prohibition of interference with unaffiliated EPGs not only will ensure the extent of competition in the EPG market, but it also will ensure whether the programming market is fully competitive.⁵²⁰

⁵⁰⁸ *Discovery Communications*, 17 FCC Rcd 14600 (2002).

⁵⁰⁹ *Notice*, 17 FCC Rcd at 11584.

⁵¹⁰ Gemstar Reply Comments at 1, 3, 6-7.

⁵¹¹ *Id.* at 4.

⁵¹² *Id.* at 4-5.

⁵¹³ *Id.* at 5. Gemstar states that it collects subscriber fees from approximately 17,000 subscribers who previously received EPG service from StarSight, a company Gemstar purchased.

⁵¹⁴ Comcast Reply Comments at 5. *See also* Gemstar Reply Comments at 7.

⁵¹⁵ DirecTV Comments at 18.

⁵¹⁶ *Id.*

⁵¹⁷ Utilicorp Comments at 10.

⁵¹⁸ Gemstar Reply Comments at 8-12.

⁵¹⁹ *See Nondiscrimination in the Distribution of Interactive Television Services Over Cable (“Interactive Television Notice”)*, 16 FCC Rcd 1321 (2001).

⁵²⁰ Gemstar Reply Comments at 11-12.

C. Technical Issues

162. In this section, we update the information provided in the *2001 Report* regarding navigation devices and cable modems.⁵²¹

1. Cable Modems

163. Cable modem service allows cable subscribers to access high-speed data services, including the Internet, Internet Protocol ("IP") telephony, and video conferencing. Cable modem deployment continues to increase, with manufacturers shipping 1.46 million cable modems in North America during the first quarter of 2002.⁵²² Cable modem prices have declined, ranging in price from \$69-\$120, depending on features.⁵²³ The percentage of purchased modems has increased substantially relative to leased modems, with one analyst estimating that by 2004, approximately 32% of cable modem service customers will purchase rather than lease cable modems, up from 10% in 2001.⁵²⁴

164. **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), which defines interface requirements for cable modems and cable modem termination systems ("CMTS") used for high-speed data distribution over DOCSIS cable systems. CableLabs provides a method for certifying that cable modems available for retail sale are in compliance with the DOCSIS specifications.⁵²⁵ The DOCSIS 1.0 specification allows cable operators to deliver high-speed Internet services on a "best effort" basis simultaneously over the same plant as core video services.⁵²⁶ CableLabs has certified 224 DOCSIS 1.0 modems and 28 DOCSIS 1.0 CMTS.⁵²⁷

165. CableLabs continues to improve upon DOCSIS services for the cable industry. It developed DOCSIS 1.1 to provide quality of service ("QoS") functionality allowing operators to offer such products as IP telephony and tiered services, by using techniques known as data fragmentation, concatenation, and payload header suppression. IP telephony (also called "voice-over-IP" or "VoIP") is expected to be an important service offering from cable operators. To date, CableLabs has certified 42 high-speed cable modems that comply with the DOCSIS 1.1 specification, and it has certified eight DOCSIS 1.1 CMTS.⁵²⁸ In January 2002, CableLabs completed specifications for DOCSIS 2.0, the next

⁵²¹ See *2001 Report*, 17 FCC Rcd at 1318-23.

⁵²² NCTA Comments at 48. For example, Comcast distributed cable modems through 1,200 retail outlets at the end of 2001, and Cox distributes through 498 retail locations, including major electronics retailers CompUSA, Circuit City, Best Buy, Office Depot, Radio Shack and Gateway. Some manufacturers distribute their DOCSIS certified modems directly to consumers. Motorola distributes cable modems directly to over 2,000 retail outlets throughout the United States. In addition, over 100 on-line retailers sell cable modems. *Id.*

⁵²³ *Id.*

⁵²⁴ *Id.* at 50.

⁵²⁵ *2000 Report*, 16 FCC Rcd at 6092. See also CableLabs, at <http://cablemodem.com>.

⁵²⁶ "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.

⁵²⁷ CableLabs, *DOCSIS Certified/Qualified Product Availability Continues to Grow* (press release), Sept. 26, 2002. CableLabs initiated certification testing of DOCSIS modems in 1999 and has since conducted 23 waves of certification, with the latest concluding September 20, 2002.

⁵²⁸ *Id.* CableLabs states that equipment built to comply with the DOCSIS 1.1 specification is capable of supporting IP-based cable services offered by cable providers, including home networking, packet telephony and multimedia services. For a list of DOCSIS certified and qualified cable modem manufacturers, see CableLabs, *Certification & Qualification*, at <http://www.cablelabs.com/certqual/whocertified.html> (visited Oct. 18, 2002). For a list of (continued....)

version, which builds upon the capabilities of DOCSIS 1.0 and DOCSIS 1.1 by adding throughput and robustness in the upstream portion of the cable plant, from the consumer out to the Internet, and creating a network that has 30 megabit per second ("Mbps") capacity in both directions.⁵²⁹ This increase in upstream capacity is achieved by use of higher-order modulation, improved protection from RF impairments, higher symbol rates, and multiple modulation and access schemes ("A-TDMA" and "S-CDMA").⁵³⁰ Both DOCSIS 1.1 and 2.0 will be compatible with all previous versions of DOCSIS cable modems and CMTS.

166. **PacketCable.** PacketCable, another CableLabs project, is intended to develop interoperable interface specifications for delivering advanced, real-time multimedia services over two-way cable plant. Built on top of the DOCSIS cable modem infrastructure, PacketCable will use IP technology to enable a wide range of services, including IP telephony, multimedia conferencing, interactive gaming, and general multimedia applications.⁵³¹ In late 2001, CableLabs established the PacketCable test program to begin qualifying vendor equipment over the course of four certification waves in 2002.⁵³² More than a dozen MSOs are conducting technical trials based on the PacketCable specifications, and commercial deployments are expected to begin in late 2002 and into 2003.⁵³³

2. Navigation Devices

167. 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, remote control units, and other equipment, from commercial sources other than their cable providers.⁵³⁴ In 1998, the Commission adopted rules that require MVPDs to unbundle security from other functions of the navigation device and, by July 1, 2000, to make available point-of-deployment modules ("PODs"), or other equipment, to separately perform the conditional access function.⁵³⁵ On reconsideration, the Commission deferred application of the rules requiring a separate security module for analog-only devices.⁵³⁶ Thus, an MVPD subscriber will be able to obtain a set-top box without the security features

(...continued from previous page)

DOCSIS-certified CMTS manufacturers, see CABLE DATACOM NEWS, *DOCSIS CMTS Vendors*, at <http://www.cabledatcomnews.com/cmhc/docsiscmts.html> (visited Oct. 18, 2002).

⁵²⁹ CableLabs, *CableLabs Completes DOCSIS 2.0 Specs, Enabling More Advanced Modems* (press release), January 16, 2002. Under this specification, capacity is tripled, facilitating enhanced services such as video-conferencing and peer-to-peer applications.

⁵³⁰ See CED MAGAZINE, at <http://www.cedmagazine.com/ced/2002/0602/06wc.htm> (visited Nov. 7, 2002).

⁵³¹ See CableLabs, at <http://www.packetcable.com> (visited Oct. 18, 2002).

⁵³² CableLabs, *PacketCable Qualification Process Ready for 2002* (press release), Nov. 6, 2002. More than 40 vendors have submitted products for experimentation and assessment. *Id.* CableLabs has not yet certified any vendor's equipment. See Karen Brown, *PacketCable Tests Firm Up Cable's IP-Telephony Link*, BroadbandWeek.com, at http://www.broadbandweek.com/news/020603/print/020603_telecom_three.htm (visited Oct. 18, 2002). CableLabs established the specifications in late 2000. See CableLabs, *Cablelabs Releases New Interim PacketCable Specifications* (press release), Nov. 28, 2000.

⁵³³ NCTA Comments at 51.

⁵³⁴ 47 U.S.C. § 549.

⁵³⁵ 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* ("Navigation Report and Order"), 13 FCC Rcd 14775 (1998).

⁵³⁶ *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, 14 FCC Rcd 7596 (1999); see 47 C.F.R. § 76.1204.

("host device") from retailers and will need the MVPD to provide a card-sized POD module for security functions.⁵³⁷

168. Through the OpenCable project, CableLabs has developed specifications for the POD module as well as the interface that a host device needs to accommodate the POD.⁵³⁸ CableLabs also developed the POD-Host Licensing Agreement ("PHILA") to provide manufacturers with the necessary technology to make PODs work in host devices.⁵³⁹ The Consumer Electronics Association contends that although technical experts in the consumer electronics ("CE") and cable industries have developed the necessary minimal standards for digital cable-compatible equipment, there remain issues that the industries have yet to resolve, including copy protection, digital connectors, support for pay-per-view functions, certification process and Electronic Program Guides.⁵⁴⁰ The CE industry proposes a non-exclusive agreement and suggests a number of alternative provisions to the existing PHILA.⁵⁴¹ One major television manufacturer, Panasonic, has signed the PHILA, allowing Panasonic to develop, manufacture, and market digital televisions that will be able to receive high definition and other digital programs via cable, including premium services, without the use of set-top boxes.⁵⁴²

169. CableLabs is continuing its efforts to develop next generation navigation devices with its initiative for the OpenCable Application Platform 1.0 ("OCAP") or "middleware" specification. The specification, completed on December 21, 2001, is designed to enhance the ability of the consumer electronics industry to build and market integrated DTV sets, digital set-top boxes, and other navigation devices directly to consumers.⁵⁴³ OCAP 1.0 provides specifications 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.⁵⁴⁴ Six MSOs have indicated that their systems will support CableLabs-certified, OCAP-enabled devices once such equipment becomes commercially available.⁵⁴⁵ In February 2002, major electronics manufacturers including Panasonic, Philips, Samsung, Sharp, and Sony participated in the OCAP Developers' Conference.⁵⁴⁶ Fourteen companies have indicated they will build

⁵³⁷ The POD requirement is intended to permit portability among set-top boxes, which will increase the market base and facilitate volume production. *Navigation Report and Order*, 13 FCC Rcd at 14793-4.

⁵³⁸ See CableLabs, at <http://www.opencable.com> (visited Oct. 18, 2002).

⁵³⁹ Set-top box manufacturers Motorola and Scientific Atlanta have signed the PHILA, and CableLabs is engaged in negotiations over the PHILA with other manufacturers. Letter from William A. Check, Vice President, Science and Technology, NCTA, to Magalie R. Salas, Secretary, FCC, Oct. 31, 2001.

⁵⁴⁰ See Letter from Michael Petricone, Vice President, Technology Policy, CEA, to W. Kenneth Ferree, Chief, FCC Media Bureau (Sept. 11, 2002), at 1.

⁵⁴¹ *Id.*

⁵⁴² Panasonic, *Panasonic is First Major TV Manufacturer to Sign PHILA Agreement with CableLabs* (press release), Oct. 17, 2002. See also Bill McConnell, *Plug-and-Play is On the Way*, BROADCASTING & CABLE, Oct. 28, 2002, at 42.

⁵⁴³ CableLabs, *CableLabs Publishes OCAP Middleware Specifications* (press release), Jan. 3, 2002. OCAP 1.0 supports a JAVA-based Execution Engine (EE).

⁵⁴⁴ NCTA Comments at 44.

⁵⁴⁵ See Letter from William A. Check, Vice President, Science & Technology, NCTA, to Michael K. Powell, Chairman, FCC (Dec. 26, 2001), Attachment. Adelphia, AT&T Broadband, Charter, Comcast, Cox, and AOL Time Warner indicated their support.

⁵⁴⁶ CableLabs, *Nearly 90 Firms Attend OCAP Developers' Conference, Interoperability Testing Event* (press release), Feb. 27, 2002. See also NCTA Comments at 46.

platforms using the specification.⁵⁴⁷ In May 2002, CableLabs released OCAP 2.0, which is designed to support additional interactive applications in consumer devices.⁵⁴⁸ The Consumer Electronics Retailers Coalition has expressed concerns that the OCAP specification contains technical requirements that are not consistent with the Commission rules prohibiting MVPDs from precluding the addition of features or functions in navigation devices.⁵⁴⁹

3. Emerging Services

170. We continue to monitor development of interactive television ("ITV") technologies and services. The Commission has described ITV as a service that supports subscriber-initiated choices or actions that are related to one or more video programming streams.⁵⁵⁰ Such services may include VOD,⁵⁵¹ PVR, gaming, e-mail, TV-based e-commerce ("t-commerce"), interactive advertising, Internet access, and program-related enhanced content.⁵⁵² Cable MSOs and DBS operators continue to develop these services as measures to increase subscribership, develop new streams of revenue, and reduce churn. We note that to date commercial two-way interactive service deployments have been very limited.⁵⁵³ According to one analysis, there were 12.7 million ITV households, or 11.8% of total households ("THH"), at the end of 2001, and projected estimates of 22.1 million (20.3% THH) by year end 2002, 33.4 million (30.4% THH) in 2003, 45.7 million (41.1% THH) in 2004, and 58.2 million (51.9% THH) in 2005.⁵⁵⁴ Revenue projections for ITV vary, depending on the services included in the mix, but one analysis estimates revenues increasing from \$467.8 million in 2001 to over \$11.5 billion in 2005, with

⁵⁴⁷ CableLabs, *14 Companies Respond to CableLabs Software RFP* (press release), Sept. 30, 2002. The purpose of the RFP was to solicit industry implementations of OCAP to hasten the ability of cable operators to launch new services made possible by OCAP. *Id.*

⁵⁴⁸ CableLabs, *CableLabs Publishes OCAP 2.0 Middleware Specifications* (press release), May 6, 2002. OCAP 2.0 extends the specification by adding support for web-based Presentation Engines, such as xHTML, XML, and ECMAScript.

⁵⁴⁹ See Consumer Electronics Retailers Association, *Answers of Consumer Electronics Retailers Coalition to Hoedown Questions Regarding Cable Industry's Draft POD Host Interface License Agreement*, filed June 6, 2002 in CS Docket No. 97-80.

⁵⁵⁰ See *Interactive Television Notice* fn. 519 *supra*. The Commission sought comment on whether rules are necessary to prevent anticompetitive behavior and to promote diversity and capital investments in the ITV market.

⁵⁵¹ See ¶¶ 39-41, 69, and 106 *supra* for discussions of VOD developments.

⁵⁵² *2000 Report*, 16 FCC Rcd at 6088. One analyst defines ITV as two-way interactive services designed for the TV offered by any type of TV operator – cable, satellite, terrestrial broadcast – with a return path via cable, wireless or dial-up. See *2002 Emarketer Study*, fn. 99 *supra*, at 36. NCTA defines ITV as a combination of television with interactive content and enhancements, providing a richer entertainment experience as well as information, blending traditional viewing with the interactivity of a personal computer. ITV features can include graphics, Internet access, e-mail, chat, instant messaging, home shopping, home banking, interactive games, on-demand services such as weather and financial information, pay-per-view, and video on demand. See NCTA, *Cable Developments 2002*, Volume 26, Number 1, at 239.

⁵⁵³ Jennifer Lee, *Interactive TV is Finally Here, Sort Of*, NEW YORK TIMES, Apr. 4, 2002, at E1.

⁵⁵⁴ *2002 Emarketer Study* at 105. This forecast counts households using stand-alone PVRs and web/Internet TV services as well as interactive program guide services that use a return channel. In addition, this forecast is based on several assumptions: 1) that the growth of ITV households directly correlates with the growth of digital TV households, particularly digital cable services; 2) that the demand for premium digital content and a corresponding demand for interactive program guide and PVR functionality will drive digital TV and ITV services; and 3) that cable companies will need to offer additional interactive services in order to raise the average revenue per subscriber and prevent churn to DBS providers. *Id.*

subscription services accounting for nearly half of all revenues, followed by interactive advertising and e-commerce.⁵⁵⁵

171. A number of companies are involved in developing the technical standards, equipment and software necessary to provide ITV services.⁵⁵⁶ 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.⁵⁵⁷ In terms of production of ITV content and applications, the multiple but incompatible platforms in use today have slowed their development. In May 2002, the ITV Production Standards Initiative, led by GoldPocket, released version 1.0 of its "XML" specification for writing interactive television programs.⁵⁵⁸ TVXML Forum was formed in June 2002, but its focus is primarily on potential ITV messaging applications and the goal of unifying communications protocols between television, mobile phone and home PC platforms.⁵⁵⁹ The group is planning to release its first specification sometime in 2003.⁵⁶⁰ Over the past year, there has been consolidation among the major ITV middleware developers.⁵⁶¹ Major cable operators, DBS operators, and some overbuilders have agreements with companies such as Liberate, Wink, Open TV, Worldgate, and GoldPocket.

IV. ADMINISTRATIVE MATTERS

172. This *2002 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).

173. It is ORDERED that the Office of Legislative Affairs shall send copies of this *2002 Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

⁵⁵⁵ *2002 Emarketer Study* at 109. Myers Mediaenomics estimates that revenues will reach \$4.5 billion in 2005, from \$378 million in 2001; McKinsey Consulting estimates revenues of \$17.5 billion in 2005 (but provides no forecast from 2001-2004); and ABN-AMRO estimates revenues of \$20 billion in 2005, from \$359.5 million in 2001. *Id.* at 109-110.

⁵⁵⁶ Major ITV middleware and content providers include Liberty's OpenTV, ACTV and Wink; Liberate; Worldgate; and GoldPocket Interactive.

⁵⁵⁷ *CableLabs Adopts Set-top ITV Specs*, BROADCASTING & CABLE, Nov. 16, 2001. CableLabs believes that by adding this specification to the OCAP compliant digital set-top boxes, ITV producers will be able to develop content in a common format for worldwide distribution. *Id.*

⁵⁵⁸ *ITV Standards, Full Specification of ITV Content Production Standards Published at Cable 2002 Conference* (press release), May 6, 2002. According to ITV Standards, the production standards, based on extensible markup language ("XML"), establish a method for content production for interactive programs, by specifying a common nomenclature and method for describing the timing and content of interactive assets such as trivia games, polls, interactive advertising, leader boards, and other interactive content, across set-top box middleware platforms. *See* *ITV Standards*, at <http://www.itvstandards.org/iTVPublic/overview.aspx>.

⁵⁵⁹ Karen Brown, *Forum Seeks Common ITV Message*, BROADBAND WEEK, June 3, 2002. *See also* Duffy Hayes, *ITV End Game*, CED MAGAZINE, Aug. 2002 available at <http://www.cedmagazine.com/ced/2002/0802/id1.htm> (visited Nov. 15, 2002). The forum counts over 100 member companies operators, equipment vendors, content providers, and third party application developers.

⁵⁶⁰ *Id.*

⁵⁶¹ *See, e.g.,* Christopher Saunders, *Liberty-Backed OpenTV Acquires ACTV, Wink*, INTERNETNEWS.COM, Sept. 26, 2002, available at <http://www.internetnews.com/IAR/article.php/1470941> (visited Nov. 15, 2002).

174. It is FURTHER ORDERED that the proceeding in MB Docket No. 02-145 IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A
List of Commenters

Initial Comments

AT&T Corp. ("AT&T")
Broadband Service Providers Association ("BSPA")
Comcast Corporation ("Comcast")
DIRECTV, Inc. ("DirecTV")
EchoStar Satellite Corporation ("EchoStar")
John Emerson ("Emerson")
Hometown Online, Inc. ("Hometown")
National Cable & Telecommunications Association ("NCTA")
National Rural Telecommunications Cooperative ("NRTC")
Satellite Broadcasting and Communications Association ("SBCA")
South Dakota Network, LLC ("South Dakota")
State of Hawaii ("Hawaii")
Utilicorp Communications Services, Everest Connections Corporation, and Ex-Op of Missouri, Inc.
("Utilicorp")

Reply Comments

AT&T Corp. ("AT&T")
Cablevision Systems Corporation ("Cablevision")
Comcast Corporation ("Comcast")
DIRECTV, Inc. ("DirecTV")
EchoStar Communications ("EchoStar")
Gemstar-TV Guide International ("Gemstar-TV Guide")
Hometown Online, Inc. ("Hometown")
Kansas City Cable Partners d/b/a Time Warner Cable KCCP (Kansas City Cable
Partners")
National Association of Broadcasters ("NAB")
National Cable & Telecommunications Association ("NCTA")
National Rural Telecommunications Cooperative ("NRTC")
Northpoint Technology ("Northpoint")
Organization for the Promotion and Advancement of Small Telecommunications ("OPASTCO")
Satellite Broadcasting and Communications Association ("SBCA")
SES Americom ("SES")

APPENDIX B
TABLE B-1
Assessment of Competing Technologies⁽ⁱ⁾

Technology Used	June 98	June 99	June 00	June 01*	June 02
(1) TV Households Percent Change	98,000,000 1.03%	99,400,000 1.43%	100,801,720 1.41%	102,184,810 1.37%	105,444,330 3.19%
(2) MVPD Households ⁽ⁱⁱ⁾ Percent Change Percent of TV Households	76,634,200 4.06% 78.20%	80,882,411 5.54% 81.37%	84,423,717 4.38% 83.75%	87,830,074 4.60% 86.42%	89,890,641 1.79% 85.25%
(3) Cable Subscribers Percent Change Percent of MVPD Total	65,400,000 1.95% 85.34%	66,690,000 1.97% 82.45%	67,700,000 1.51% 80.19%	68,500,000 1.18% 77.99%	68,800,000 0.00% 76.54%
(4) MMDS Subscribers Percent Change Percent of MVPD Total	1,000,000 -9.09% 1.30%	821,000 -17.90% 1.02%	700,000 -14.74% 0.83%	700,000 0.0% 0.80%	490,000 -30.00% 0.55%
(5) SMATV Subscribers Percent Change Percent of MVPD Total	940,000 -19.14% 1.23%	1,450,000 54.26% 1.79%	1,500,000 3.45% 1.78%	1,500,000 0.0% 1.71%	1,600,000 6.67% 1.78%
(6) HSD Subscribers Percent Change Percent of MVPD Total	2,028,200 -7.15% 2.65%	1,783,411 -12.07% 2.20%	1,476,717 -17.20% 1.75%	1,000,074 -32.28% 1.14%	700,641 -29.94% 0.78%
(7) DBS Subscribers Percent Change Percent of MVPD Total	7,200,000 42.66% 9.40%	10,078,000 39.97% 12.46%	12,987,000 28.86% 15.38%	16,070,000 23.74% 18.30%	18,240,000 13.66% 20.29%
(8) OVS Subscribers ⁽ⁱⁱⁱ⁾ Percent Change Percent of MVPD Total	66,000 2100.00% 0.09%	60,000 -9.09% 0.07%	60,000 0.0% 0.07%	60,000 0.0% 0.07%	60,000 0.0% 0.07%

* - The source revised the number used for cable subscribers as of June 2001. This column has been modified accordingly.

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.

Sources:

- (1) Television households: 1998 from Nielsen Media Research as cited in *Broadcasting & Cable*, June 29, 1998, at 70; 1999 from Nielsen Media Research as cited in *Broadcasting & Cable*, June 28, 1999, at 26; and 2000 - 2002 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: 1998 from Paul Kagan Associates, Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, Cable TV Investor, August 10, 1998, at 4; 1999 from Paul Kagan Associates, Inc., *Cable Industry 10-Year Projections*, Cable TV Investor, June 25, 1999, at 6; 2000 from Paul Kagan Associates, Inc., *Cable Industry 10-Year Projections*, Cable TV Investor, June 19, 2000, at 6; 2001 from Kagan World Media, *Kagan's 10-Year Cable TV Industry Projections*, Broadband Cable Financial Databook 2001, July 2001, at 10; and 2002 from Kagan World Media, *Kagan's 10-Year Cable TV Industry Projections*, Broadband Cable Financial Databook 2002, July 2002, at 10.
- (4) MMDS subscribers: The 1998 and 1999 subscribers estimated by the FCC; 2000 subscribers from NCTA Comments for the *2000 Report* at 9; 2001 subscribers from NCTA Comments for the *2001 Report* at 7; and 2002 subscribers from NCTA Comments at 12.
- (5) SMATV subscribers: 1998 subscribers from NCTA 1998 Comments at 6; 1999 subscribers from NCTA Comments for the *2000 Report* at 5; and 2001 subscribers from NCTA Comments for the *2001 Report* at 9; and 2002 subscribers from NCTA Comments at 12.
- (6) HSD subscribers: 1998-2000 from SkyReport.com at http://www.skyreport.com/dth_us.htm; 2001 from SBCA Comments for the *2001 Report* Table 1 at 4; and 2002 from SkyReport.com at http://www.skyreport.com/dth_us.htm.
- (7) DBS subscribers: 1998 from Minal Damani and Jennifer E. Sharpe, *U.S. DBS Marketplace: 1998*, The Strategis Group, July, 1998 at 6; 1999-2000 from SkyReport.com at http://www.skyreport.com/dth_us.htm; 2001 from SBCA Comments for the *2001 Report*, Table 1 at 4; and 2002 from SkyReport.com at http://www.skyreport.com/dth_us.htm.
- (8) OVS subscribers: OVS subscriber count for 1997 through 2002 estimated by the FCC.

TABLE B-2
Number and Subscriber Size of Major Cable System Clusters
(Cumulative Figures)

Range of Clustered Subscribers (thousands)	1998		1999		2000		2001	
	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)	Clusters	Subscribers (millions)
100-199	33	4.6	41	5.4	26	3.6	30	4.3
200-299	25	6.3	16	4	13	3.2	17	4.2
300-399	20	6.7	20	6.8	22	7.4	18	6.1
400-499	7	3.2	9	3.9	13	5.9	10	4.4
>500	21	19.6	28	23.8	34	34.3	32	33.3
Total	106	40.4	114	43.9	108	54.4	107	52.3

Sources:

Paul Kagan Associates, Inc., *Major Cable TV Systems/Clusters*, The Cable TV Financial Databook, 1997, at 39-41; 1998, at 38-42; 1999, at 50-55; 2000 from Kagan World Media, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2001 at 36; and 2001 from Kagan World Media, *Major Cable TV Systems/Clusters*, Broadband Cable Financial Databook 2002 at 38.

TABLE B-3
2002 Concentration in the National Market for Purchase of Video Programming⁽¹⁾

Rank	Company	Percent of Subscribers ⁽²⁾
1	AT&T	14.75
2	Time Warner	14.29
3	DirecTV	11.99
4	Comcast	9.46
Top 4		50.48
5	EchoStar	8.30
6	Charter	7.55
7	Cox	6.95
8	Adelphia	6.07
Top 8		79.35
9	Cablevision	3.33
10	Mediacom	1.76
Top 10		84.44
Top 25		90.26
Top 50		92.05
	HHI	884 ⁽³⁾

Notes:

- (1) MSO subscriber totals as of June 2002, and reported in Top Cable System Operators as of June 2002, Kagan World Media, *Cable TV Investor*, Sept. 30, 2002, at 9-10. There is no double counting of subscribers. If a cable operator is partially owned by more than one MSO, its subscribers are assigned to the largest MSO. Subscribers for DirecTV and EchoStar are based on SkyReport.com at http://www.skyreport.com/dth_us.htm.
- (2) The total number of MVPD subscribers used to calculate the HHI is 89,890,641 from Table B-1.
- (3) The HHI is calculated on the basis of market shares for the top 60 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
1999-2002

Market Share	Percent of MVPD Subscribers			
	1999	2000	2001	2002
Top Share	20.50	19.07	16.44	14.75
Top 2	36.45	33.99	30.79	29.04
Top 3	45.68	44.27	42.11	41.03
Top 4	53.94	52.70	51.64	50.48
Top 10	74.95	83.90	84.29	84.44
Top 25	84.92	89.75	89.70	90.26
Top 50	89.58	92.14	91.38	92.05
-HHI	923	954	905	884

Sources:

Data for 1999 through 2001 were taken from *Reports, 1998-2001*. Data for 2002 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	AOL Time Warner (100)
American Movie Classics (AMC)	Oct-84	Cablevision (60)
Animal Planet	Oct-96	Liberty Media (39.2), Cox (19.7)
@Max	May-01	AOL Time Warner (100)
Black STARZ!	Feb-97	Liberty Media (100)
Canales ñ (6 digital channels)*	Oct-98	Liberty Media (90)
Cartoon Network	Oct-92	AOL Time Warner (100)
Cinemax	Aug-80	AOL Time Warner (100)
CNN	Jun-80	AOL Time Warner (100)
CNN En Español	Mar-97	AOL Time Warner (100)
CNN Headline News	Jan-82	AOL Time Warner (100)
CNN International	Jan-95	AOL Time Warner (100)
CNNfn	Dec-95	AOL Time Warner (100)
Comedy Central	Apr-91	AOL Time Warner (50)
Court TV	Jul-91	Liberty Media (50) AOL Time Warner (50)
Discovery Channel	Jun-85	Liberty Media (50), Cox (24.6)
Discovery Civilization	Oct-96	Liberty Media (25), Cox (12.3)
Discovery En Español	Aug-98	Liberty Media (50), Cox (24.6)
Discovery Health	Jul-98	Liberty Media (50), Cox (24.6), Comcast (20)
Discovery HD Theatre	Jun-02	Liberty Media (50), Cox (24.6), Comcast (20)
Discovery Home & Leisure	Oct-96	Liberty Media (50), Cox (24.6)
Discovery Kids	Oct-96	Liberty Media (50), Cox (24.6)
Discovery Science Channel	Oct-96	Liberty Media (50), Cox (24.6)
Discovery Wings: The Aviation and Adventure Network	Jul-98	Liberty Media (50), Cox (24.6)

* 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 (%)
E! Entertainment	Jun-90	Comcast (50)
Encore	Apr-91	Liberty Media (100)
Encore Action	Sept-94	Liberty Media (100)
Encore Love Stories	Jul-94	Liberty Media (100)
Encore Mystery	Jul-94	Liberty Media (100)
Encore True Stories	Sept-94	Liberty Media (100)
Encore WAM! America's Youth Network	Sept-94	Liberty Media (100)
Encore Westerns	Jul-94	Liberty Media (100)
5StarMax	May-01	AOL Time Warner (100)
FoxSports (2) channels	Various	Cablevision (50)
Fox Sports Latin America	Nov-96	Liberty Media (50)
G4 Video Gaming Network	Jun-02	Comcast (94)
GEMS International Television	Apr-93	Liberty Media (100)
Golf Channel	Jan-95	Comcast (91)
Hallmark Channel (formerly Odyssey)	Oct-93	Liberty Media (32.5)
HBO (Home Box Office)	Nov-72	AOL Time Warner (100)
HBO Latino	Nov-00	AOL Time Warner (100)
HBO 2	Oct-98	AOL Time Warner (100)
HBO Signature	Oct-93	AOL Time Warner (100)
HBO Comedy	May-99	AOL Time Warner (100)
HBO Family	Dec-96	AOL Time Warner (100)
HBO Zone	May-99	AOL Time Warner (100)
Home Shopping Network	Jul-85	Liberty Media (20)
iN Demand	Nov-85	Comcast (55), AOL Time Warner (33), Cox (11)
Independent Film Channel	Sep-94	Cablevision (60)
International Channel	Jul-90	Liberty Media (90)
MoreMAX	Aug-91	AOL Time Warner (100)
MoviePlex	Oct-94	Liberty Media (100)

Programming Service	Launch Date	MSO Ownership (%)
Much Music USA	Jul-94	Cablevision (75)
Outdoor Life Network	Jul-95	Comcast (100)
OuterMax	May-01	AOL Time Warner (100)
Ovation: The Arts Network	Apr-96	AOL Time Warner (4.2)
PIN (Product Information Network)	Apr-94	Cox (45)
Prevue Channel	Jan-88	Liberty Media (51)
QVC	Nov-86	Comcast (57), Liberty Media (43)
Sci-Fi Channel	Sept-92	Liberty Media (20)
Sneak Prevue (TV Guide)	May-91	Liberty Media (12)
Starz!	Feb-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	May-99	Comcast (50)
TBS	Dec-76	AOL Time Warner (100)
TLC (The Learning Channel)	Nov-80	Liberty Media (50), Cox (24.6)
Thriller Max	Jun-98	AOL Time Warner (100)
TNT (Turner Network Television)	Oct-88	AOL Time Warner (100)
Travel Channel	Feb-87	Liberty Media (50), Cox (24.6)
Turner Classic Movies	Apr-94	AOL Time Warner (100)
USA Network	Apr-80	Liberty Media (20)
Viewers Choice 1-10 and Hot Choice (11 multiplexed channels)	Nov-85	Cox(20), AOL Time Warner (17)
WE	Jan-97	Cablevision (60)
WMAX	May-01	AOL Time Warner (100)

Sources:

NCTA, *Directory of Program Services*, Cable Developments 2002, at 29-141.

Liberty Media Corp., at http://www.libertymedia.com/our_affiliates/video_programming.htm

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
All News Channel	Nov-89
America's Store	Sep-86
ANA Television Network	Dec-91
ART (Arab Radio & Television)	1999
Beauty Channel	Sep-02
BBC America	Mar-98
BET	Jan-80
BET Action Pay Per View	Sep-90
BET Gospel	Jul-02
BET Hip Hop	Jul-02
BET Jazz: The Jazz Channel	Jan-96
BET Movies	Feb-97
Biography Channel	Dec-98
Black Belt TV: The Martial Arts Network	Jun-02
Bloomberg Television	Jan-95
B Mania	Nov-00
Boating Channel	Nov-98
Box Music Network	Dec-85
Bravo	Feb-80
Buzztime Entertainment	1984
Canal Sur	Aug-91
CCTV-4 (China Central Television)	1995
CelticVision	Mar-95
Church Channel	Jan-02
Classic Arts Showcase	May-94
CMT (Country Music Television)	Mar-83
CNBC	Apr-89
CNET: The Computer Network	Jan-95
College Entertainment Network	Jan-97
Crime Channel	Jul-93

Programming Service	Launch Date
C-SPAN	Mar-79
C-SPAN2	Jun-86
C-SPAN3*	Sep-97
Deep Dish TV	Jan-86
Disney Channel	Apr-83
Do-It-Yourself Channel	Sep-99
Dream TV Network	Nov-96
Ecology Communications	Nov-94
Enlace	Nov-96
ESPN	Sep-79
ESPN Classic Sports (formerly Classic Sports Network)	May-95
ESPN2	Oct-93
ESPNEWS	Nov-96
ESPN EXTRA	Sep-99
ESPN NOW	Sep-99
ESPN Today	Jun-01
ETC (The Erotic Network)	Jul-00
EWTN: Global Catholic Network	Aug-81
Extasy	Feb-98
Filipino Channel	Apr-94
Fine Living	Mar-02
Flix	Aug-92
Food Network	Nov-93
Fox Movie Channel	Nov-94
Fox News Channel	Oct-96
Fox Sports World	Nov-97
Fox Sports Español	Feb-99
FX	Jun-94
Free Speech TV (FSTV)	Jun-95
Galavision	Oct-79
Game Bank	Nov-95
Game Show Network	Dec-94
Golden Eagle Broadcasting	Nov-98
Goodlife Television Network (formerly Nostalgia Channel)	Jun-98
Great American Country	Dec-95
Hispanic Television Network	Aug-01

Programming Service	Launch Date
History Channel	Jan-95
History Channel International	Dec-98
Home & Garden Television	Dec-94
Hot Choice	Jun-86
Hot Net	Mar-99
Hot Zone	Mar-99
HTV	Aug-95
Idea Channel	Jan-92
Inspirational Life Television (I-LIFETV)	Jun-98
Inspirational Network (INSP)	Apr-90
Interactive Channel	Nov-93
Liberty Channel	Sep-01
Lifetime Movie Network	Jun-98
Lifetime Real Women	Aug-01
Lifetime Television	Feb-84
Lightspan Partnership, Inc.	Feb-95
Locomotion Channel	Nov-96
MBC Movie Network	Nov-98
Meadow Racing Network	Nov-84
MSNBC	Jul-96
MTV Español	Aug-98
MTV Hits	May-02
MTV Jams	2002
MTV Networks Latin America (formerly MTV Latino)	Oct-93
MTV: Music Television	Aug-81
Mun2	Apr-93
My Pet TV	Sep-96
NASA Television	Jul-91
National Geographic Channel	Jan-01
National Jewish Television	May-81
Newsworld International	Sep-94
Nick At Nite's TV Land	Apr-96
Nick Too	Jan-99
Nickelodeon Gas-Games & Sports Network	Mar-99

Programming Service	Launch Date
Nickelodeon/Nick at Nite	Apr-79
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
Power TV Zhong Tian Channel	1995
Praise Television	Dec-96
Proto X	1997
Puma TV	1997
RAI International	1999
Recovery Network	Feb-97
Russian Television Network of America	Aug-00
Saigon Broadcasting Network	Feb-02
Scandinavian Channel	Oct-99
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
SoapNet	Jan-00
Speed Channel	Jan-96
Spice 1	May-89
Spice 2	Unknown

Programming Service	Launch Date
Sun TV	Aug-96
Starnet	Jan-89
Sundance Channel	Feb-96
TechTV	May-98
Telemundo Cable	Mar-00
Telemundo Communications, Inc.	Jan-87
The Erotic Network (TeN)	Aug-98
TMC (The Movie Channel)	Dec-79
True Blue	Feb-98
TNN (The National Network)	Mar-83
Toon Disney	Apr-98
Trinity Broadcasting Network (TBN)	May-73
TRIO	Sep-94
TV 5 - USA Inc.	Jan-98
TV Asia	Apr-93
TV Games Network	Unknown
TV Japan	Jul-91
TVN Entertainment Corporation (33 digital pay-per-view channels)	Feb-98
TVR (TV Russia Network)	1995
TV Guide Channel	Jan-88
TV Guide Interactive	Oct-96
TV Guide Sneak Preview	1991
TVN Direct	Jan-96
Universal Torah Broadcasting Network	Dec-98
Univision	Dec-98
UVTV/KTLA	Mar-88
UVTV/WGN	Nov-98
UVTV/WPIX	May-84
ValueVision	Oct-91
VH1 (Music First)	Jan-85
VH1 (Classic)	Aug-98
VH1 Soul	Aug-98
VH1 Country	Aug-98
VH1 Megahits	May-02
VH UNO	Nov-99

Programming Service	Launch Date
Video Rola	Jan-01
Vivid TV	Mar-99
Weather Channel	May-82
Weather Channel/Latin America	Nov-96
Weatherscan	Apr-98
Weatherscan Local	May-99
Wisdom Television	Jul-97
Word Network	Feb-00
Worship Network	Sep-92
X Cubed	Unknown
Z Music	Mar-93
ZEE TV	1999

Note:

* Cable affiliates provide 95% of the funding for C-SPAN, C-SPAN2, and C-SPAN3, but have no ownership or program control interests. DBS licensees provide the other 5% of the funding and also have no ownership or program control interests.

Source:

NCTA, *Directory of Cable Networks*, Cable Developments 2002, at 29-141.

**TABLE C-3
Regional Video Programming Services**

Programming Services	Launch Date	MSO Ownership (%)
Arabic Channel	Apr-91	
Arizona News Channel	Nov-96	
Automotive Television Network (ATN)	Sep-95	
Bay News 9	Sep-97	
Bonjour USA	Sep-94	
Cable TV Network of New Jersey	Jul-93	
California Channel	Feb-91	
Casa Club TV	Jul-97	
Central Florida News 13	Oct-97	AOL Time Warner (50)
ChicagoLand Television News (CLTV)	Jan-93	
CN8 – The Comcast Network	1996	Comcast (100)
Comcast SportsNet	Oct-97	Comcast (78)
Comcast SportsNet Mid Atlantic (formerly Home Team Sports)	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 Cincinnati	1989	Cablevision (45)
Fox Sports Net Detroit	Sep-97	Cablevision (45)
Fox Sports Net Florida	1989	Cablevision (45)
Fox Sports Net Midwest	Sep-97	Cablevision (45)
Fox Sports Net New England	Jan-88	Cablevision (50), AT&T (50)
Fox Sports Net New York	1989	Cablevision (45)
Fox Sports Net North	Mar-89	Cablevision (22.5), Liberty Media (50)
Fox Sports Net Northwest	Nov-88	Cablevision (41.5)
Fox Sports Net Ohio	Feb-89	Cablevision (45)
Fox Sports Net Pittsburgh	Apr-86	Cablevision (45)

Programming Services	Launch Date	MSO Ownership (%)
Fox Sports Net Rocky Mountain	Nov-88	Cablevision (45)
Fox Sports Net South	Aug-90	Cablevision (45)
Fox Sports Net Southwest	Jan-83	Cablevision (45)
Fox Sports Net West	Oct-85	Cablevision (45)
Fox Sports Net West 2	Jan-97	Cablevision (45)
Hip Hop Network	Jan-97	
International Television Broadcasting (ITV)	Apr-86	
Las Vegas One News	Apr-98	
Local News on Cable	Feb-97	
Madison Square Garden Network (MSG)	Oct-69	Liberty Media (18), Cablevision (41.5)
MediaOne News	Dec-95	Liberty Media (100)
Metro Sports Channel		AOL Time Warner (50), AT&T (50)
MGM Networks Latin America	Jul-97	
Michigan Government Television	Jul-96	
Midwest Sports Channel	Mar-89	
MSG Metro Guide	Aug-98	Cablevision (100)
MSG Metro Learning Channel	Aug-98	Cablevision (100)
MSG Traffic and Weather	Aug-98	Cablevision (100)
Neighborhood News L.I.	Unknown	Cablevision (75)
New England Cable News	Mar-92	Comcast (50)
New England Sports Network (NESN)	Mar-84	
New York 1 News	Sep-92	AOL 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-98	Cablevision (75)
News 12 Westchester	Nov-95	Cablevision (75)
News 8 Austin	Sep-99	
News 14 Carolina	2002	AOL Time Warner
News Channel 5+	Sept-96	
News 14 Carolina		AOL Time Warner
News Now 53	Jun-97	Cox (50)
News on One	Oct-97	

Programming Services	Launch Date	MSO Ownership (%)
News Watch 15	Oct-99	
Newschannel 8	Oct-91	
NGTV (National Greek Television)	Dec-87	
Nippon Golden Network	Jan-82	
NorthWest Cable News	Dec-95	
Ohio News Network	May-97	
PASS Sports (Pro-Am Sports System)	Apr-84	
Pennsylvania Cable Network (PCN)	Sep-79	
Pittsburgh Cable News Channel (PCNC)	Jan-94	Comcast (30)
Rarities Exchange	Dec-98	
San Diego's News Channel 15	Jan-97	
Six News Now	Jul-95	
Soundtrack Channel (STC)	Mar-02	
South Florida News Channel	1998	
SportsChannel Florida	Dec-87	Liberty Media (6), Cablevision (13.5)
Sunshine Network	Mar-88	Liberty Media (34.5), Cox (5.3)
Texas Cable News	Jan-99	
Turner South (STC)	Mar-02	AOL Time Warner
TV33	Dec-95	
WSBK	Feb-88	
Yankee Entertainment Sports Network (YES)	Mar-02	

Sources:

NCTA, *Regional Cable Networks*, Cable Developments 2002, at 171-194.

DirecTV Comments at 14.

TABLE C-4
Planned Programming Services

Programming Service	Planned Launch Date, if Announced
American Legal Network	TBA
America National Network	TBA
AMC's American Pop	TBA
American West Network	TBA
Anthropology Programming and Entertainment	TBA
Anti-Aging Network	TBA
Applause	TBA
Auto Channel	TBA
BET World Music Beat	TBA
Bingo TV	TBA
Black Women's Television	4Q02
Booknet	2003
Caribbean Visions Television	TBA
CFN-Children's Fashion Network	4Q02
Chop TV	TBA
Collectors Channel	TBA
CSTV (College Sports Television)	1Q03
Diversity Network	4Q02
Documentary Channel	TBA
EXPN (Action Sports on Demand)	1Q03
Fad TV (Fashion & Design Television)	2Q03
Fashion Network	TBA
Fifth Avenue Channel	TBA
Fox Enhanced TV	TBA
GETV Network	1Q03
Global Village Network	TBA
Gospel Network	TBA
Hobby Craft Interactive	TBA
Honey Vision	TBA
Investment TV	TBA
Local News Network	TBA

Programming Service	Planned Launch Date, If Announced
Martial Arts Action Network	TBA
MEN (Maverick Entertainment Network)	1Q04
Military Network	4Q03
Moore TV Network	TBA
Moviewatch	1Q03
Noah's World International	2Q03
Opportunity Television Network	TBA
Orb TV	TBA
Outlet	2Q03
PCOM (Native American Nations Network)	1Q03
Performance Showcase	TBA
Premiere Horse Network	TBA
Puppy Channel	4Q03
RadioTV Network	2Q03
Real Estate Network (TREN)	TBA
Romanceland	TBA
Seminar TV Network (Seminar TV)	TBA
Senior Citizens Television Network	4Q02
Si TV	2Q03
Skywatcher Channel	TBA
Sundance Documentary Channel	3Q03
TeN BLOX	1Q03
TeN Blue	1Q03
The Football Channel (TFN)	TBA
The World Cinema Channel	TBA
Theater Channel	TBA
The Tennis Channel	4Q02
UBC (Urban Broadcasting Company) TBA	TBA
U.S. Military Television Network	TBA
World Cinema	TBA
Youth Sports Broadcasting Channel	TBA

Sources:

NCTA, *Planned Services*, Cable Developments 2002, at 151-170.

Operators Want Hardcore Porn, Multichannel News at

http://www.tvinsite.com/multichannelnews/index.asp?layout=print_pate&doc_id=104331, Oct. 10, 2002.

R. Thomas Umstead, *Service Goes to Extremes*, Multichannel News, Apr. 29, 2002, at 3.

R. Thomas Umstead, *Bedol: Sports Tiers Are Fine With Us*, Multichannel News, Nov. 4, 2000, at 14.

Linda Moss, *New Nets Eye Outlets for Men, Gays*, Multichannel News, Nov. 18, 2002 at 3.

TABLE C-5
MSO Ownership in National Programming

Services ¹	Subs. (mil)	Liberty Media	AOL Time Warner	Comcast	Cox	Cablevision Systems
Action Max	* ²		100.0%			
AMC	82.6					60%
Animal Planet	77.0	39.2%			19.7%	
@Max	*		100.0%			
Black Starz!	*	100.0%				
Canales ñ (6 channels)	*	90.0%				
Cartoon Network	79.5		100.0%			
Cinemax	38.1		100.0%			
CNN	85.6		100.0%			
CNN Español	10.5		100.0%			
CNN Headline News	81.7		100.0%			
CNN International ³	10.0		100.0%			
CNN fn	18.0		100.0%			
Comedy Central	78.2		50.0%			
Court TV	68.1	50.0%	50.0%			
Discovery	86.0	50.0%			24.6%	
Discovery Civilization	7.0	50.0%			24.6%	
Discovery En Español	*	50.0%			24.6%	
Discovery Health	33.7	50.0%		20.0%	24.6%	
Discovery HD Theatre	*	50.0%				
Discovery Home&Leisure	7.0	50.0%			24.6%	
Discovery Kids	10.0	50.0%			24.6%	
Discovery Science	10.0	50.0%			24.6%	
Discovery Wings	7.0	50.0%			24.6%	
E! Entertainment	77.2			50.0%		
Encore	18.0	100.0%				
Encore Action	*	100.0%				

Services ¹	Subs. (mil)	Liberty Media	AOL Time Warner	Comcast	Cox	AT&T	Cablevision Systems
Encore Love Stories	*	100.0%					
Encore Mystery	*	100.0%					
Encore True Stories	*	100.0%					
Encore WAM!	*	100.0%					
Encore Westerns	*	100.0%					
5Star Max	*		100.0%				
Fox Sports (2 channels)	16.4						50.0%
Fox Sports Latin America	10.3	50.0%					
GEMS International TV	6.4	50.0%					
G4 Video Gaming Ntwk	*			94.0%			
Golf Channel	35.0			91.0%			
Hallmark Channel	43.5	32.5%					
HBO	38.1 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%				
HSN	74.0	20.0%					
iN Demand	28		33.0%	55.0%	11.0%	44.0%	
Independent Film Channel	21.8						60.0%
International Channel	11.8	90.0%					
More Max	38.1		100.0%				
Movie Plex	8.0	100.0%					
Much Music USA	44.0						75.0%
Outdoor Life	40.0			100.0%			
Outer Max	*		100.0%				
Ovation	5.0		4.2%				
PIN	35.0				45.0%		
Prevue Channel	*	51.0%					

Services ¹	Subs. (mil)	Liberty Media	AOL Time Warner	Comcast	Cox	AT&T	Cablevision Systems
QVC	79.6	42.0%		58.0%			
Sci-Fi	75.0	20.0%					
Sneak Prevue	34.0	12.0%					
Starz!	13.0	100.0%					
Starz! Cinema	*	100.0%					
Starz! Family	*	100.0%					
Starz! Theater	*	100.0%					
Style	17.0			50.0%		10.0%	
TBS	87.0		100.0%				
TLC	83.2	50.0%			24.6%		
Thriller Max	37.0		100.0%				
TNT	85.5		100.0%				
Travel Channel	60.9	50.0%			24.6%		
TCM	49.3		100.0%				
USA	85.6	20.0%					
Viewers Choice 1-10	*		17.0%		20.0%		
WE (formerly Romance)	25.0						60.0%
Wmax	*		100.0%				

Notes:

AT&T ownership interests are shown in the Comcast column because Comcast acquired AT&T Broadband on Nov. 18, 2002.

¹ In addition to cable, other services such as MMDS (wireless cable), SMATV (satellite master antenna television), satellite, including DBS (direct broadcast satellite) and HSD (home satellite dish), 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 10 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 2002, at 29-143.
<http://foxsports.lycos.com/content/view?contentID=541079>

TABLE C-6
Top 20 Programming Services by Subscribership

Rank	Programming Network	Number of Subscribers (Millions)	MSO Ownership Interest in Network (%)
1	TBS	87.0	AOL Time Warner (100)
2	Discovery Channel	86.0	Liberty Media (49), Cox (24.6)
3	ESPN	85.9	
4	CNN	85.6	AOL Time Warner (100)
5	USA Network	85.6	Liberty Media (21)
6	TNT	85.5	AOL Time Warner (100)
7	Nickelodeon/Nick at Nite	85.3	
8	C-SPAN	85.0	
9	A&E	85.0	
10	TNN	84.9	
11	Lifetime Television	84.6	
12	ABC Family Channel	84.1	
13	The Weather Channel	83.9	
14	MTV	83.4	
15	TLC	83.2	Liberty Media (49), Cox (24.6)
16	AMC	82.6	Cablevision (75)
17	ESPN2	82.6	
18	CNBC	82.3	
19	VH1	81.7	
20	CNN Headline News	81.7	AOL Time Warner (100)

Notes:

In addition to cable, other services such as MMDS (wireless cable), SMATV (satellite master antenna television), satellite, including HSD (home satellite dish) and DBS (direct broadcast satellite), broadcast television and LPTV (low power television) may distribute these signals. Subscriber figures may include these non-cable services. Cable affiliates provide 95% of the funding for C-SPAN, but have no ownership or program control interests. DBS licenses provide the other 5% of the funding and also have no ownership or program control interests.

Source:

NCTA, *Top 20 Cable Networks*, Cable Developments 2002, at 21-22.

TABLE C-7
Top 20 Programming Services by Prime Time Rating

Rank	Programming Service	MSO with Ownership Interest (%)
1	Lifetime Television	
2	TNT	AOL Time Warner (100)
3	Nick at Nite	
4	TBS	AOL Time Warner (100)
5	Cartoon Network	AOL Time Warner (100)
6	USA Network	Liberty Media (20)
7	Disney Channel	
8	ESPN	
9	A&E	
10	FX	
11	Fox News Channel	
12	Discovery Channel	Liberty Media (50), Cox (24.6)
13	MTV	
14	TNN	
15	TLC	Liberty Media (50), Cox (24.6)
16	CNN	AOL Time Warner (100)
17	ABC Family Channel	
18	History Channel	
19	Sci-Fi Channel	Liberty Media (20)
20	Court TV	Liberty Media (50), AOL Time Warner (50)

Source:

Kagan World Media, *Day Part Ratings Averages, Prime Time (May)*, Cable Program Investor, July 29, 2002, at 11.