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Federal Communications Commission
Washington, D.C. 20554

In the Matter of
Annual Assessment of the Status of
Competition in Markets for the
Delivery of Video Programming
CS Docket No. 99-230

SIXTH ANNUAL REPORT

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I. INTRODUCTION

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 markets for the delivery of video programming.¹ Congress imposed this annual reporting requirement in the Cable Television Consumer Protection and Competition Act of 1992 (“1992 Cable Act”)² as a means of obtaining information on the competitive status of markets for the delivery of video programming.³ This is the Commission’s sixth annual report (“*1999 Report*”) submitted pursuant to Section 628(g) of the Communications Act.⁴

A. Scope of this Report

2. In this *1999 Report*, we update the information in our previous reports and provide data and information that summarizes the status of competition in markets for the delivery of video programming. The information and analysis provided in this report are based on publicly available data, filings in various Commission rulemaking proceedings, and information submitted by commenters in response to a *Notice of Inquiry* (“*Notice*”) in this docket.⁵ 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 (“HSDs”), wireless cable systems using frequencies in the multichannel multipoint distribution service (“MMDS”) and the instructional television fixed service

¹ Communications Act of 1934, as amended, § 628(g), 47 U.S.C. § 548(g).

² Pub.L. No. 102-385, 106 Stat. 1460 (1992).

³ The 1992 Act imposed a regulatory scheme on the cable industry designed to serve as a transitional mechanism until competition develops and consumers have adequate multichannel video programming alternatives. One of the purposes of Title VI of the Communications Act, Cable Communications, is to “promote competition in cable communications and minimize unnecessary regulation that would impose an undue economic burden on cable systems.” 447 U.S.C. § 521(6).

⁴ 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), CS Docket No. 94-48, First Report (“1994 Report”), 9 FCC Rcd 7442 (1994); Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 95-61, Second Annual Report (“1995 Report”), 11 FCC Rcd 2060 (1996); Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 96-133, Third Annual Report (“1996 Report”), 12 FCC Rcd 4358 (1997); Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CS Docket No. 97-141, Fourth Annual Report (“1997 Report”), 13 FCC Rcd 1034 (1998); and Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CS Docket No. 98-102, Fifth Annual Report (“1998 Report”), 13 FCC Rcd 24284 (1998).

⁵ *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, CS Docket No. 99-230, Notice of Inquiry (“*Notice*”), 14 FCC Rcd 9617 (1999). Appendix A provides a list of commenters.

("ITFS"), 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 telephone carriers ("LECs"), and electric and gas utilities. We include these services and providers because they offer, or may offer, video programming or video programming in conjunction with nonvideo services.

4. 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 discuss competitors serving multiple dwelling unit ("MDU") buildings. We further address programming issues and technical advances. In Section IV, we examine a limited number of cases where consumers have a choice between an incumbent cable operator and another MVPD in a specific market and report on the effects of this entry.

B. Summary of Findings

5. In the *1999 Report*, we examine the status of competition in markets 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, the *Report* finds that competitive alternatives and consumer choices continue to develop. Cable television still is the dominant technology for delivery of video programming to consumers in the MVPD marketplace, although its market share continues to decline. As of June 1999, 82% of all MVPD subscribers received their video programming from a local franchised cable operator, compared to 85% a year earlier.

6. The total number of subscribers to both cable and noncable MVPDs continues to increase. A total of 80.9 million households subscribed to multichannel video programming services as of June 1999, up 5.5% over the 76.6 million households subscribing to MVPDs in June 1998. This subscriber growth accompanied a 3.2 percentage point increase in multichannel video programming distributors' penetration of television households to 81.4% as of June 1999.

7. Since the *1998 Report*, the number of cable subscribers continued to grow, reaching 66.7 million as of June 1999, up almost 2% over the 65.4 million cable subscribers in June 1998. The total number of noncable MVPD households grew from 11.2 million as of June 1998 to 14.2 million homes as of June 1999, an increase of 26%.

8. Much of the increase in the growth of noncable MVPD subscribers is attributable to the growth of DBS. DBS appears to attract former cable subscribers and consumers not previously subscribing to an MVPD. Between June 1998 and June 1999, the number of DBS subscribers grew from 7.2 million households to 10.1 million households. DBS subscribers now represent 12.5% of all MVPD subscribers. There also have been a number of additional cable overbuilds in the last year. While the Commission has certified new open video systems, some OVS operators have converted portions of their systems to franchised cable operations. Over the last year, the number of subscribers to and market shares of HSD and MMDS subscribers continued to decline. However, the number of SMATV subscribers has increased this year, reversing a decline exhibited the previous year.

9. During the period under review, cable rates rose faster than inflation, although the difference between the cable price index and the Consumer Price Index ("CPI") is not as great as in the previous year. According to the Bureau of Labor Statistics, between June 1998 and June 1999, cable prices rose 3.8% compared to a 2% increase in the CPI, which measures general price changes. Concurrently with these rate increases, capital expenditures for the upgrading of cable facilities increased (up 13.2% over 1998), the number of video and nonvideo services offered increased, and programming costs increased

(license fees increased by 14.6% and programming expenses increased by 16.3%). In addition, the increase in labor costs in the communications industry is reported to exceed the increase in labor costs for all industries combined by almost 2%. We note that during this period, on March 31, 1999, rates for cable programming service tiers ("CPSTs") were deregulated by Congress.⁶ We also note that cable operators' pricing decisions may be affected where direct competition exists. Available evidence indicates that when an incumbent cable operator faces head-to-head competition, 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.

10. The Telecommunications Act of 1996 ("1996 Act")⁷ removed barriers to LEC entry into the video marketplace in order to facilitate competition between incumbent cable operators and telephone companies. For example, the 1996 Act repealed a statutory prohibition against an entity holding attributable interests in a cable system and a LEC with overlapping service areas. At the time of the 1996 Act's passage, it was expected that local exchange telephone carriers would begin to compete in video delivery markets, and cable operators would begin to provide local telephone exchange service. Since the *1998 Report*, there has been an increase in the amount of video programming provided to consumers by telephone companies, although the expected technological convergence that would permit use of telephone facilities for video service has not yet occurred. Ameritech now holds 111 cable franchises and reports that it serves approximately 250,000 subscribers. BellSouth has received cable franchises in 21 areas with the potential to pass 1.4 million homes in addition to its right to provide MMDS service to approximately 3.5 million homes. Other LECs, including GTE, SNET, and U S West, also provide cable television service in a number of areas. As reported last year, Bell Atlantic and SBC have joint marketing agreements with DirecTV in order to offer video service to their telephone customers in some areas. While the 1996 Act created the OVS framework as a means of entry into the video marketplace by LECs, few telephone companies have sought certification. Alternatively, only a limited number of cable operators have begun to offer telephone service, and such service uses traditional telephone switching equipment rather than cable facilities. However, cable operators are beginning to develop and test Internet Protocol ("IP") telephony. The potential to provide telephone service prompted several large transactions over the past year, most notably AT&T's purchase of Telecommunications, Inc. ("TCI").

11. Since the *1998 Report*, the most significant convergence of service offerings has been the pairing of Internet service with other service offerings. There is evidence that a wide variety of companies throughout the communications industries are attempting to become providers of multiple services, including data access. Cable operators continue to expand their broadband infrastructure that permits them to offer high-speed Internet access. Currently, the most popular way to access the Internet over cable is through the use of a cable modem and personal computer. A small portion of cable Internet access is delivered through a television receiver rather than a personal computer. Many cable operators also are planning to integrate telephony and high-speed data access. Like cable, the DBS industry is developing ways to bring advanced services to their customers. For example, Hughes Network Systems, Inc., parent of DirecTV, offers a satellite-delivered Internet access service ("DirecPC") with a telephone return path. EchoStar and OpenTV, Inc., a company that produces interactive television technology, plan to offer e-mail, e-commerce, and on-line banking services in the next year. SMATV operators are also beginning to offer local and long distance telephone service and Internet access along with video service. In addition, a few MMDS operators are offering Internet service.

⁶ See Sections 623(c)(3) and (c)(4); 47 U.S.C § 543(c)(3) and (c)(4).

⁷ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).

12. The data provided in this *Report* suggest that companies comprising several different segments of the communications industry are seeking to provide combinations of services to consumers, including video, voice, and data. In this context, we believe it is appropriate to compare the cable industry with other communications industry segments that currently provide, or plan to provide, such combinations of services. Specifically, we find that the cable television industry holds a relatively small market share compared to other communications industry segments that offer or intend to offer video, voice, and data services. For example, in 1998, the total revenue for these segments of the communications industry (i.e., cable television, MMDS, DBS, television broadcasting, long distance telephone, and local telephone) was \$334 billion. Of this total, cable operators represented 12.3% of the communications industry's revenues.

13. Noncable MVPDs continue to report that regulatory and other barriers to entry limit their ability to compete with incumbent cable operators and to thereby provide consumers with additional choices. Noncable MVPDs also continue to experience some difficulties in obtaining programming from both vertically integrated cable programmers and unaffiliated programmers who 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. Other issues also remain with respect to how, and under what circumstances, existing inside wiring in MDUs may be made available to alternative video service providers.

14. In addition, consumers have historically reported that their inability to receive local signals from DBS operators may negatively affect their decision as to whether to subscribe to DBS. The Commission previously recommended that legislation be enacted to remove barriers to DBS carriage of local broadcast signals. On November 29, 1999, a revised Satellite Home Viewer Act ("SHVA") was signed into law, permitting satellite providers to distribute local broadcast signals within their local television markets.⁸ On that date, DBS operators began offering local broadcast stations in some markets, and reported plans to provide local broadcast stations to a significant portion of U. S. households within the next few months. The Commission hopes that the revised SHVA will have a significant and positive effect on MVPD competition. We expect that DBS operators will now offer a programming package more comparable to and competitive with the services offered by cable operators. We further believe that increased competition is the best way to keep cable rates reasonable and in check. Moreover, the Commission plans to aggressively implement the new SHVA in order to facilitate consumer choice in the MVPD marketplace.

15. Our findings as to particular distribution mechanisms operating in markets for the delivery of video programming include the following:

■ Cable Systems: Since the *1998 Report*, the cable television industry has continued to grow in terms of subscribership (up to 66.7 million subscribers as of June 1999, a 2% increase from June 1998), channel capacity (some operators now offer over 170 video channels), number of national satellite-delivered video programming services (up to 283 services by June 1999 from 245 in June 1998, a 16% increase), revenues (an approximate 8% increase between June 1998 and June 1999), audience ratings (non-premium cable viewership rose from a 39 share at the end of June 1998 to a 42 share at the end of June 1999), and expenditures on programming (an approximate 15% increase in program license fees paid by cable system operators).

⁸ Pub. L. No. 106-113, § 1000(9), 113 Stat. 1501 (enacting S. 1948, including the Satellite Home Viewer Improvement Act of 1999 ("SHVIA"), Title I of the Intellectual Property and Communications Omnibus Reform Act of 1999 ("IPACORA"), relating to copyright licensing and carriage of broadcast signals by satellite carriers, codified in scattered sections of 17 and 47 U.S.C.).

■ The cable industry remains healthy financially, which has enabled it to invest in improved facilities, either through upgrades or rebuilding. As a result, there have been increases in channel capacity, the deployment of digital transmissions that provide better picture quality than can be offered through analog service, and nonvideo services, such as Internet access. Cable operators also offer telephony, although the use of integrated facilities remains primarily experimental with limited exceptions.

■ 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, and from medium and low power satellites requiring larger satellite dish antennas. In the last year, DirecTV merged with United States Satellite Broadcasting Co., Inc. ("USSB") and acquired PrimeStar. There are over ten million DBS subscribers (EchoStar, DirecTV, and PrimeStar's subscribers being transitioned to DirecTV's service), an increase of approximately 39% since the *1998 Report*. Between June 1998 and June 1999, the number of HSD subscribers, measured as the number of HSD users that actually purchase programming packages, declined from 2 million to 1.8 million, a decrease of 12%, that is likely due to subscribers switching to DBS. DirecTV and EchoStar are among the ten largest providers of multichannel video programming service. DBS represented a 12.5% share of the national MVPD market in June 1999 and HSD represented another 2.2% of that market.

■ Wireless Cable Systems: Currently, the wireless cable industry ("MMDS") provides competition to the cable industry in only limited areas. MMDS subscribership fell from 1.0 million subscribers to 821,000 subscribers between June 1998 and June 1999, a decrease of 17.9%. Analysts state that the advent of digital MMDS and the Commission's authorization of two-way MMDS service will make high-speed Internet and telephony possible and have the potential to foster renewed MMDS growth. Wireless cable represented a 1% share of the national MVPD market in June 1999.

■ SMATV Systems: SMATV systems 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 multiple dwelling units ("MDUs"). SMATV subscribership has increased 54% since the last report, with the industry representing an approximately 1.8% share of the national MVPD subscribership as of June 1999. Upgraded facilities, and expanded service offerings to include DBS programming, Internet access, telephone service, and security services, have fostered SMATV growth.

■ Broadcast TV: Broadcast networks and stations are competitors to MVPDs in the advertising and program acquisition markets and supply video programming directly to the approximately 20% of television households that are not MVPD subscribers. Additionally, broadcast networks and stations are suppliers of content for distribution by MVPDs. Since the *1998 Report*, the broadcast industry has continued to grow in the number of operating stations (from 1583 in 1998 to 1599 in 1999) and in advertising revenues (\$34.6 billion in 1998, a 6.7% increase over 1997). While audience levels have declined in the last year, the four major television broadcast networks still account for a 52% share of prime time television viewing for all television households. Broadcast television stations continue to deploy digital television ("DTV") service. There are 111 television stations on the air broadcasting DTV signals and digital simulcasts of some programming have begun.

■ LEC Entry: The 1996 Act expanded opportunities for LECs to enter markets for the delivery of multichannel video programming. As noted in previous reports, LECs do not yet represent a national presence in the MVPD market. The competitive presence of LECs in specific video markets, however, is growing. In certain areas, especially in the midwest, LECs are already or are becoming significant regional competitors. Particularly notable are the efforts of Ameritech as a cable overbuilder and

BellSouth as an overbuilder and MMDS operator. Ameritech has acquired 111 cable franchises, potentially passing more than 1.7 million homes. Ninety of these cable franchises are operational, in whole or in part, and they serve at least 250,000 subscribers. BellSouth has acquired cable franchises in 18 areas, with the potential to pass 1.2 million homes, and is launching digital MMDS service in a number of areas. In previous reports, we noted that, while LECs were not yet a national competitor, their competitive presence was growing. It now appears that their rate of entry into the MVPD marketplace may be slowing.

■ **Open Video Systems:** In the 1996 Act, Congress established a new framework for the delivery of video programming -- the 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. The Commission has certified 13 OVS operators to serve 28 areas. RCN owns the only operating open video systems and currently serves areas surrounding Boston, New York City, and Washington, D.C. In several areas for which it holds OVS certifications, or portions of these areas, RCN has converted its systems to franchised cable systems. Between June 1998 and June 1999, the number of OVS subscribers went from approximately 66,000 to 60,000, a decline attributed to the conversion of some OVS operations to cable service. OVS subscribers now represent slightly less than 1% of all MVPD subscribers. As a result of litigation that was resolved in January 1999, one of the major advantages for an entity choosing the OVS mode of regulation -- the absence of any need for a traditional cable television franchise -- may no longer exist.

■ **Internet Video:** By June, 1999 there were an estimated 50 million households with personal computers and over 100 million Americans were Internet users. Previously, we reported on the availability of software technologies that make real-time and downloadable audio and video from the Internet accessible through a personal computer. We also noted that there are technologies available for the provision of Internet video over a television using set-top box Internet access. As of June 1999, investment and development of Internet video services was continuing, though video pictures offered by Internet video still remain less than broadcast quality. Media companies continue to offer increasing amounts of video over their Web sites in the expectation that the pictures will be acceptable for the intended use or eventually improve to broadcasting or VCR quality.

■ **Home Video Sales and Rentals:** Video cassettes, laser discs, and digital video discs ("DVDs") provide feature films similar to those distributed by cable operators on premium channels and others involved in the distribution of video programming. The number of homes with DVD players has grown rapidly in the two years since this technology was introduced. About two million homes have DVD players and about the same number have laser disc players, far less than the 82% of all households with VCRs. Most new home video programming available for sale or rental, including movies, documentaries and concerts, is released in VCR, laser disc, and DVD formats. Recently a new home video technology, the personal video recorder ("PVR") has been introduced. A PVR can pause, rewind, and perform slow motion and instant replay of a live program, thereby allowing a viewer to watch earlier portions of a program while later portions of the program are still being broadcast. A PVR is intended for use with a service that provides an onscreen programming guide service through a telephone connection. This technology can be used to create a personal menu and can learn to record in accordance with a viewer's television preferences.

■ **Electric Utilities:** Utilities are not yet major competitors in the telecommunications or cable markets, but they possess characteristics that could potentially help them become competitively significant in the cable market. Some may already possess fiber-optic networks throughout the public rights-of-way in the areas they serve. In the last year, several utilities have announced, commenced, or moved forward with ventures involving multichannel video programming distribution. Starpower, a joint venture between RCN and PEPCO, has begun to offer video, telephone, and Internet services in the Washington, D.C. area. Seren, a wholly-owned subsidiary of Minneapolis-based Northern States Power, is currently offering cable and

high-speed data access as an overbuilder in several Minnesota communities and plans to expand its service. Others, including several municipal utilities in Iowa, the municipal utility in Lebanon, Ohio, and Millennium Telecom, which is partially owned by Tri-County Electric Cooperative in Texas, have begun or plan to begin video and other services to their customers.

16. We also find:

■ Consolidations within the cable industry continue as cable operators acquire and trade systems. The seven largest operators now serve almost 90% of all U.S. cable subscribers. However, in terms of one traditional economic measure, national concentration among the top MVPDs has declined since last year.⁹ DBS operators DirecTV and EchoStar rank among the ten largest MVPDs in terms of nationwide subscribership along with eight cable multiple system operators ("MSOs"). As a result of acquisitions and trades, cable MSOs have continued to increase the extent to which their systems form regional clusters. Currently, 40.4 million of the nation's cable subscribers are served by systems that are included in regional clusters. By clustering their systems, cable operators may be able to achieve efficiencies that facilitate the provision of cable and other services, such as telephony.

■ The number of satellite-delivered programming networks has increased from 245 in 1998 to 278 in 1999. Vertical integration of national programming services between cable operators and programmers, measured in terms of the total number of services in operation, declined from last year's total of 39% to 36% this year, continuing a five year trend. However, in 1999, one or more of the top six cable MSOs held an ownership interest in each of 101 vertically integrated national programming services. Sports programming warrants special attention because of its widespread appeal and strategic significance for MVPDs. The *Report* identifies 75 regional networks, 26 of which are sports channels, many owned at least in part by MSOs. There are also 30 regional and local news networks that compete with local broadcast stations and national cable networks (e.g., CNN).

■ The program access rules adopted pursuant to the 1992 Cable Act were designed to ensure that alternative MVPDs can acquire, on non-discriminatory terms, vertically-integrated satellite delivered programming. We recognize that the terrestrial distribution of programming, including in particular regional sports programming, could eventually have a substantial impact on the ability of alternative MVPDs to compete in the video marketplace. We will continue to monitor this issue and its impact on the competitive marketplace.

■ Technological advances that will permit MVPDs to increase both quantity of service (i.e., an increased number of channels using the same amount of bandwidth or spectrum space) and types of offerings (e.g., interactive services) continue. In particular, cable operators and other MVPDs continue to develop and deploy advanced technologies, especially digital compression, in order to deliver additional video options and other services (e.g., data access, telephony) to their customers. To access these wide ranging services, consumers use "navigation devices." In the last year, on reconsideration, the Commission made some modifications to the rules and policies adopted to implement Section 629 of the Communications Act, which is intended to ensure commercial availability of these navigation devices. The cable industry reports that it is making steady progress towards the development of specifications to separate out security and non-security functions for the interoperability of digital set-top boxes by July 1, 2000, as required by the

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.

rules. Interface requirements and a certification process for the high-speed cable modems needed to access data services have also been developed. When these processes are complete, additional competition in the market for equipment used by subscribers should be possible.

II. COMPETITORS IN MARKETS FOR THE DELIVERY OF VIDEO PROGRAMMING

A. Cable Industry

17. This section addresses the performance of franchised cable system operators¹⁰ during the past year in five major areas. First, we report on general performance in terms of available basic services, subscriber levels, and viewership. Second, we discuss the cable industry's financial performance including its revenue, cash flow status, and stock valuations. Third, in the area of capital acquisition and disposition, we examine the amount of funds raised and describe how these funds are being used to upgrade physical plant and to acquire new systems. Fourth, we consider other performance indicators such as system transactions, cable overbuilds,¹¹ and rates charged by cable operators. Lastly, in the area of provision of advanced broadband services,¹² we review the growth of cable data access, digital broadband services, and broadband telephony.

¹⁰ A franchise is defined as an authorization supplied by a federal, state, or local government entity to own or construct a cable system in a specific area. Communications Act §§ 602(9), 602(10), 47 U.S.C. §§ 522(9), 522(10). A cable system operator is defined as "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." Communications Act § 602(5), 47 U.S.C. § 522(5). *See also* 47 C.F.R. § 76.5(cc).

¹¹ An "overbuild" occurs when two or more wireline cable television systems directly compete for subscribers in a local video programming delivery market.

¹² The services enabled by advanced telecommunications capability are called here "advanced broadband services." These services include ". . . high-quality voice [*e.g.*, cable telephony and Internet Protocol ("IP") telephony], data [*e.g.*, Internet access through cable modems], graphics [*e.g.*, interactive guides], and video telecommunications [*e.g.*, digital video, pay-per-view ("PPV"), video-on-demand ("VOD"), and interactive programming]. . . ." *See Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996*, CC Docket No. 98-146, Report, 14 FCC Rcd 2398, 2406 ¶ 20 (1999).

1. General Performance

18. Since our last report, the cable industry has continued to grow in basic cable¹³ subscribership, homes passed,¹⁴ basic cable penetration,¹⁵ premium service subscriptions,¹⁶ basic cable viewership, and channel capacity.¹⁷ In addition, during 1998 and the first half of 1999, the industry continued to implement expanded broadband service offerings including digital video, Internet access through cable, interactive cable, and facilities-based broadband telephony.

19. ***Cable's Capacity to Serve Television Households.*** The number of U.S. homes with at least one television ("TV households") was reported as 98 million at the end of 1997 and June 1998.¹⁸ At the end of 1998 and June 1999, the number of U.S. TV Households was reported as 99.4 million.¹⁹ The number of homes passed by cable was 94.6 million at the end of 1997 and 95.6 million at the end of 1998, an increase of 1.1%.²⁰ By the end of June 1999, the number of homes passed by cable was 96.1 million.²¹ The number

¹³ 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" 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 satellite delivered cable programming channels carried on the system. One or more expanded tiers of service, known as Cable Programming Service ("CPS") tiers 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 satellite delivered cable programming channels and are available for additional monthly fees. Communications Act §§ 623(b)(7), 623(l)(1), 47 U.S.C. §§ 543(b)(7), 543(l)(2).

¹⁴ Homes passed is defined as the total number of households capable of receiving cable television service.

¹⁵ Penetration is defined as the ratio of the number of cable subscribers to the total number of households passed by the system.

¹⁶ Premium services are cable networks provided by a cable operator on a per channel basis for an extra monthly fee. Pay-per-view services are cable networks provided by a cable operator on a per program basis. Pay-per-view service is a separate category from premium service. Communications Act §§ 623(b)(7), 623(l)(2), 47 U.S.C. §§ 543(b)(7), 543(l)(2).

¹⁷ Channel capacity is defined as the maximum number of video channels that a system can carry simultaneously. Video channel capacity can be decreased on any given network simply by using bandwidth for other services such as Internet.

¹⁸ Nielsen Media Research. 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 1999 is the same as the figure for December 1998. In App. B, Tbl. B-1, we report the number of television households as of year-end 1998 and June 1999. These figures are from Paul Kagan Associates, and we use these estimates of television households for consistency with the remainder of reported figures in this section.

¹⁹ Nielsen Media Research.

²⁰ See App. B, Tbl. B-1.

²¹ *Id.*

of homes passed as a proportion of the number of TV households increased 0.1% from 96.5% in December 1997 to 96.6% in December 1998, remaining at 96.6% of TV households in the first half of 1999.²²

20. **Subscribership.** Basic cable television subscribership grew from 64.9 million subscribers at the end of 1997 to 66.1 million subscribers at the end of 1998, an increase of 1.8%. It continued to grow to an estimated 66.7 million subscribers by June 30, 1999, a six month increase of approximately 0.9%.²³ Basic cable penetration also grew, increasing from 68.6% at the end of 1997 to 69.1% at the end of 1998. By the end of the first half of 1999, it grew to 69.4%.²⁴ The percentage of TV households subscribing to cable continued to increase, rising to 66.8% of all TV households by the end of 1998, and to 67% by the end of June 1999.²⁵ The number of homes subscribing to premium cable services increased in 1998 from 31.5 million homes at the end of 1997 to 35.3 million homes, an increase of 21.1%.²⁶ For the first half of 1999, premium cable subscribers increased again, reaching 35.9 estimated subscribers, a six month increase of 1.7%. The number of premium services to which homes are subscribing (known as "premium units") increased from 57.9 million premium units subscribed to by the end of 1998, to an estimated 59.2 million units subscribed to by the end of the first half of 1999, a 2.2% increase over six months.²⁷

21. **Channel Capacity.** Cable operators continue to make significant capital expenditures to upgrade and rebuild cable infrastructure to increase channel capacity.²⁸ Cable operators are increasing their channel capacity by increasing their bandwidths and deploying digital technologies.²⁹ The increased bandwidth enables them to offer additional channels of audio and video services, as well as other services (e.g., Internet access and telephony). Cable operators indicate that they need to provide additional and advanced services to compete with DBS.³⁰ For example, Comcast notes that DBS operator Echostar recently announced that it will launch a satellite that will increase its channel capacity by 150 channels, enabling Echostar to offer consumers a 500-channel service.³¹ Some cable operators currently provide customers with more than 170 programming channels. Comcast digital cable now offers over 170 channels

²² *Id.*

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ Traditionally, there is significant difficulty in getting access to accurate information with regard to channel capacity. However, the Commission has recently adopted a revised Form 325 for obtaining channel capacity figures. See 1998 Biennial Regulatory Review, "Annual Report of Cable Television Systems," Form 325, filed pursuant to Section 76.403 of the Commission's Rules, CS Docket No. 98-61, Report and Order, 14 FCC Rcd 4720 (1999).

²⁹ See 1998 Report, 13 FCC Rcd at 24294 ¶ 18.

³⁰ Comcast Reply Comments at 1.

³¹ *Id.* at 10.

to 60% of its subscribers.³² Comcast's digital offerings include 35 premium channels, 38 pay per view channels, 40 audio music channels, and an on-screen programming guide.³³ Cox has also increased its channel capacity, offering more than 200 video and audio channels in some of its service areas.³⁴ Through digital compression techniques, operators can also offer their customers improved reception and resolution quality.

22. According to one source, cable systems with a capacity of 30 or more channels accounted for 84.6% of cable systems in October 1998.³⁵ This represents 8,328 systems nationwide.³⁶ Systems with channel capacities of 54 channels or more accounted for 20.7% of cable systems in October 1998, or 2,040 systems.³⁷ In October 1999, cable systems with a capacity of 30 or more channels accounted for 85.4% of cable systems, or 8,236 systems.³⁸ Cable systems with channel capacities of 54 channels or more accounted for 22.4% of cable systems in October 1999, or 2,164 systems.³⁹ In addition, the same source now reports that 89 systems, or almost 1% of all cable systems now have a capacity of 91 or more channels with 8 systems having over 125 channels.⁴⁰

23. In October 1998, 98.8% of all cable customers subscribed to systems with capacities of 30 channels or more.⁴¹ Moreover, 61.5% of all subscribers were served by systems with capacities of 54 or more channels in October 1998.⁴² In October 1999, 98.6% of all cable customers subscribed to systems with

³² *Id.* at 2, 10.

³³ *Id.* at 16, 17.

³⁴ Cox Communications, Inc., *1998 Summary Annual Report*, Feb. 6, 1999, at 5.

³⁵ *See* App. B, Tbl. B-3. Use of October to October data is consistent with our *1997 and 1998 Reports*, and is the method Warren Publishing, Inc., uses to report channel capacity system statistics. Warren Publishing reports the percentage of all systems polled. For the purposes of this *Report*, the figures have been recalculated to report the percentage of systems responding to the Warren poll (*i.e.*, we subtract out the number of systems "not available" for response).

³⁶ *See* App. B, Tbl. B-3.

³⁷ *Id.*

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ Warren Publishing, Inc. *Channel Capacity of Existing Cable Systems, Television & Cable Factbook: Services* Volume No. 68, 2000 Edition (to be released). *See also* App. B, Tbl. B-5.

⁴¹ *See* App. B, Tbl. B-4. Use of October to October data is consistent with our *1997 and 1998 Reports*, and is the method Warren Publishing, Inc., uses to report channel capacity system statistics. Warren Publishing reports the percentage of all systems polled. For the purposes of this *Report*, the figures have been recalculated to report the percentage of systems responding to the Warren poll (*i.e.*, we subtract the number of systems "not available" for response).

⁴² *See* App. B, Tbl. B-4.

capacities of 30 channels or more, and 64.2% of all subscribers were served by systems with capacities of 54 or more channels in October 1999.⁴³ In addition, 4.8% of all subscribers are reportedly served by systems with capacities of 91 or more channels.⁴⁴

24. **Viewership.** As reported last year, viewership shares of non-premium cable networks has grown significantly over the past decade, while viewership shares of broadcast television stations has steadily declined. This trend has continued over the past year. Audience share statistics for Monday through Sunday, 24 hours a day,⁴⁵ show that non-premium cable audience shares rose 8.8% from an average 38.8 share⁴⁶ from July 1997 through June 1998, to an average 42.2 share between July 1998 and June 1999.⁴⁷ Monday through Sunday, 24 hours a day, broadcast television audience shares decreased 5% from an average 64.1 share from July 1997 through June 1998, to an average 60.9 share between July 1998 and June 1999.⁴⁸

25. **Cable Networks.** In 1998, the number of basic cable networks increased from 131 to 139, a 6.1% increase.⁴⁹ During the first half of 1999, the number of basic cable networks increased to 141, a 1.4% half-year increase.⁵⁰ The number of premium networks increased from 14 to 18, a 28.6% increase from the end of 1997 to the end of 1998, and increased by four channels during the first half of 1999, reaching 22, a 22.2% half-year increase.⁵¹ The number of pay-per-view ("PPV") networks increased in 1998 from six to ten networks, but in the first half of 1999 PPV networks decreased to eight, a half year decrease of 20%.⁵²

⁴³ *Id.*

⁴⁴ Warren Publishing, Inc. Channel Capacity of Existing Cable Systems, Television & Cable Factbook: Services Volume No. 68, 2000 Edition (to be released).

⁴⁵ The audience statistics reported here are Nielsen Media Research measurements of television viewing 24 hours a day for an entire week (*i.e.*, Monday through Sunday).

⁴⁶ 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 multiple set viewing.

⁴⁷ Nielsen Media Research, *Nielsen Television Index: Usage/Viewing Source Share Trends*, Sept. 1999. The *Nielsen Television Index* reports non-premium, or basic, cable viewership as "cable origination" viewing shares and premium cable viewership as "pay" shares. According to Nielsen, "cable origination" includes basic cable service and pay-per-view (defined as payment on a per-program basis), and "pay" includes only the premium tier (defined as payment on a per-channel basis for networks, such as HBO and Showtime).

⁴⁸ Nielsen Media Research, *Nielsen Television Index: Usage/Viewing Source Share Trends*, Sept. 1999. "Broadcast" shares include network affiliates, independent, and public broadcast stations.

⁴⁹ These statistics regarding types of cable networks are from *NCTA Cable Television Developments*, Summer 1999. These totals differ from those reported in the Vertical Integration Section of this report. In that section, the information on cable networks is from *NCTA Developments* and additional sources. See App. B, Tbl. B-6.

⁵⁰ See App. B, Tbl. B-5. See also App. D, Tbls. D-1 through D-4.

⁵¹ See App. B, Tbl. B-6.

⁵² *Id.*

In the first half of 1999, the number of networks classified as combined increased from seven to ten, or 42.9%.⁵³

26. **Programming Costs.** Programming networks incurred expenses of \$4.9 billion for producing and acquiring programming in 1998, a 13.9% increase over 1997. Reported estimates indicate that these programming network expenses will total \$5.7 billion in 1999, a 16.3% increase over 1998.⁵⁴ License fees paid by cable system operators to basic cable network programmers increased 14.6%, from approximately \$4.8 billion in 1998 to \$5.5 billion in 1999.⁵⁵ Analysts estimate that in 2000 fees will increase by an additional 10.9% to reach \$6.1 billion.⁵⁶ Most cable operators pass increased programming costs along to subscribers as allowed under the Commission's rules.⁵⁷

27. Other programming expenses incurred by cable operators include copyright fees for broadcast signal carriage pursuant to Section 111 of the Copyright Act.⁵⁸ As of November 2, 1999,⁵⁹ copyright fees paid by cable system operators for broadcast signal carriage for the period July 1, 1997, to December 31, 1997, were \$77.8 million, and for the period January 1, 1998, to June 30, 1998, fees collected were \$53.6 million.⁶⁰ For the period July 1, 1998, through December 31, 1998, fees collected were \$54 million, and for the period January 1, 1999, to June 31, 1999, fees collected were \$53.4 million.⁶¹ The decline in fees collected for the first period of 1998 is due largely to the changed status of WTBS from a superstation to a cable network. As such, copyright fees can no longer be collected for network TBS.

⁵³ *Id.*

⁵⁴ Paul Kagan Assocs., Inc., *Basic Cable Network Economics (1983-2009)*, Cable Program Investor, July 14, 1999, at 4.

⁵⁵ *Id.* at 4. License fees are the fees charged by a cable network to allow an operator to deliver the network's programming. License fees reported here do not include superstation license fees, common carrier payments, and copyright fees.

⁵⁶ Paul Kagan Assocs., Inc., *Basic Cable Network Economics (1983-2009)*, Cable Program Investor, July 14, 1999, at 4.

⁵⁷ 47 C.F.R. § 76.922(f)(6).

⁵⁸ Copyright Act, 17 U.S.C. § 111 *et seq.*

⁵⁹ Copyright fees, though technically due on a specific date, are collected on a rolling basis. We report the most current figures available.

⁶⁰ Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Nov. 2, 1999. Date of "collection" indicates the date the Copyright Office has deposited payments made by cable operators. Payments are due within a certain time frame around the copyright period, however, operators submit payments on a continuing basis.

⁶¹ Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Nov. 2, 1999.

2. Financial Performance

28. Data concerning cable industry revenue, cash flow, and stock prices indicate that the cable industry remained strong in 1998 and in the first half of 1999.⁶²

29. **Cable Industry Revenue.** Annual cable industry revenue grew 7.5% in 1998 over 1997, reaching \$32.7 billion. By the end of 1998, revenue per subscriber grew 5.5% to \$499.40 per subscriber per year, or \$41.62 per subscriber per month. Analysts estimate that 1999 year-end total revenue will reach \$35.3 billion, an estimated 8% increase,⁶³ and that revenue per subscriber per year will reach approximately \$529, or \$44 per subscriber per month.⁶⁴

30. From June 1997 through June 1998, nationwide cable rates rose more than four times the rate of inflation.⁶⁵ Between June 1998 and June 1999, cable prices still increased by 3.8% compared to a 2% increase in the Consumer Price Index (“CPI”), which is used to measure general price changes.⁶⁶ A portion of these rate increases is attributable to capital expenditures for the upgrading of cable facilities, an increased number of video and nonvideo services offered, and increased programming costs. In addition, the increase in labor costs in the communications industry exceeds the increase in labor costs for all industries combined by 1.9%.⁶⁷

31. When cable system revenue is classified by source, advanced video service revenues (analog and digital) show the greatest amount of growth in 1999, as was also the case in 1998.⁶⁸ Revenues for advanced video services increased 117.3% in 1998, reaching \$452 million, as operators continued to roll out new services.⁶⁹ Analysts estimate that revenues from advanced services will more than double by the

⁶² See Paul Kagan Assocs., Inc., *Cable MSO Stocks*, Cable TV Investor, Sept. 3, 1998, at 6. As of August 1998, the Kagan MSO Index consisted of: Adelphia, Cable Michigan, Cablevision, Century Communications, Comcast Communications, Cox Communications, Jones tracking stock A, MediaOne Group, TCA Cable, TCI tracking stock A, and Canadian MSO Rogers Communications tracking stock B. As of November 1998, Cable Michigan was dropped from the Kagan MSO Index. As of March 1999, TCI tracking stock A was dropped from the Index. In April, AT&T was added to the Index. As of August 1999, TCA was dropped from the Index, while Insight Communications was added.

⁶³ See App. B, Tbl. B-7.

⁶⁴ *Id.*

⁶⁵ Bureau of Labor Statistics, *Consumer Price Index Data*, <http://stats/bls.gov>.

⁶⁶ *Id.*

⁶⁷ NCTA Comments at 36.

⁶⁸ The “advanced video services” category includes both analog video services and digital video services. Advanced analog services provide users with certain two-way capabilities such as PPV and near-video-on-demand (“NVOD”). Digital video services can provide superior video picture quality and increased channel capacity. Both digital and advanced analog services require the use of a set-top box. See also fn. 12 *supra*.

⁶⁹ See App. B, Tbl. B-7.

end of 1999, reaching an estimated \$1 billion.⁷⁰ In the more traditional revenue-generating sectors of cable, the home shopping sector showed the greatest increase, generating \$187 million in annual revenue in 1998, a 23% increase over the previous year.⁷¹ Industry analysts predict that home shopping revenue will increase 15% in 1999 to an estimated \$215 million.⁷² Equipment and installation revenue earned by MSOs increased 13.4% in 1998, from \$2.3 billion in annual revenue in 1997 to an estimated \$2.6 billion in 1998. Industry analysts predict this revenue sector will increase to an estimated \$2.8 billion by year-end 1999.⁷³ In 1998, pay-per-view revenue declined by 23.8% and local advertising revenue declined by 3.9%.⁷⁴ Annual revenue from premium channels increased from \$5 billion in 1997 to \$5.1 billion in 1998, a 2.7% increase, and is expected to increase only 2% to \$5.2 billion by year-end 1999.⁷⁵ Revenue from the basic service tier (“BST”) and from the cable programming service tier (“CPST”) combined grew from \$20 billion in 1997 to \$21.8 billion in 1998, a 9.1% increase, and is expected to increase to \$23.2 billion by year-end 1999.⁷⁶ On March 31, 1999, rate regulation for CPST ceased under the 1996 Act.⁷⁷

32. **Cable Industry Cash Flow.** Cash flow is used to assess the financial position of cable firms. Cash flow is generally expressed as “EBITDA” (earnings before interest, taxes, depreciation, and amortization). Financial analysts reported that industry-wide cash flow increased 10.5% between the end of 1997 and the end of 1998, from \$13.4 billion to \$14.8 billion.⁷⁸ Cash flow will increase an estimated 9.1%, reaching \$16.1 billion by year-end 1999.⁷⁹ In 1998, the cable industry generated \$225.9 in annual cash flow per subscriber, \$17.63 higher than the \$208.24 per subscriber generated in 1997.⁸⁰ Analysts estimate that in 1999, cash flow per subscriber per year will increase by \$15.81, reaching \$241.68.⁸¹ The ratio of

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.*

⁷³ *Id.*

⁷⁴ See App. B, Tbl. B-7. Pay-per-view revenue varies from year-to-year based on the number and type of events available for purchase. While we report that revenue from PPV over cable has decreased between 1997 and 1998, one study reporting PPV revenue across all technologies (cable, DBS, etc.) states that PPV revenue has increased 700% between 1990 and 1999. See Showtime Event Television, *Pay Per View Decade In Review*, Nov. 30, 1999, at 5.

⁷⁵ See App. B, Tbl. B-7.

⁷⁶ *Id.*

⁷⁷ 47 U.S.C. § 543 (c)(3), (c)(4).

⁷⁸ See App. B, Tbl. B-7.

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

cash flow to revenue (“cash flow margin”) increased from 44% in 1997 to 45.2% in 1998, and is expected to increase to 45.7% in 1999.⁸²

33. **Stock Prices.** Between June 1998 and June 1999, stock market values of cable MSOs, as represented by the Kagan MSO Index, grew steadily.⁸³ By comparison, during the same period, the Standard and Poor’s Index of 500 widely held stocks (“S&P 500”)⁸⁴ and the Dow Jones Industrial Average (“Dow Jones”)⁸⁵ grew more modestly.⁸⁶ All three indices grew steadily during each of the four quarters beginning July 1, 1998. However, the Kagan MSO Index grew more rapidly from the end of the second quarter 1998 through the end of the second quarter 1999.⁸⁷ In May 1999, cable stock valuations reached historically high levels.⁸⁸

34. Analysts cite several cable-specific factors that contributed to the overall growth of cable stock valuations over the year-ended June 1999. Among the most significant were the end of CPST rate regulation on March 31, 1999, the transactions involving Paul Allen’s Charter Communications, and other proposed mergers and acquisitions including AT&T-MediaOne, Cox-TCA, and Adelphia-Century.⁸⁹ Analysts note that such consolidations can offer certain market efficiencies, such as standardization, and centralized brand and customer service management.⁹⁰

⁸² *Id.* Cash flow margin is a commonly used financial analysis tool for determining a cable operator’s operating efficiency, profitability, and liquidity.

⁸³ Paul Kagan Assocs., *Kagan Cable Average v. Market Competition*, Cable TV Investor Data Roundup, Oct. 23, 1998, at 4; Apr. 27, 1999, at 3; Aug. 19, 1999, at 4; Paul Kagan Assocs., *Money Market Digest*, Cable TV Investor, Aug. 10, 1998, at 16; Sept. 2, 1998, at 8; Sept. 11, 1998, at 12; Oct. 23, 1998, at 16; Nov. 11, 1998, at 16; Dec. 18, 1998, at 20; Mar. 3, 1999, at 24; Mar. 29, 1999, at 20; Apr. 27, 1999, at 16; May 14, 1999, at 16; June 25, 1999, at 20 (“Kagan Cable Average Oct 1998 – June 1999”).

⁸⁴ The Standard and Poor’s Index of 500 widely held stocks is a stock index that tracks a compilation of 500 industrial, transportation, financial, and utility stocks.

⁸⁵ The Dow Jones Industrial Average is a price-weighted average of 300 actively traded, nationally known company stocks that have a long record of profit growth and dividend payment and a reputation for quality management, products, and services. These stocks are primarily industrial stocks, but also include service-oriented firms.

⁸⁶ Kagan Cable Average Oct 1998 – June 1999.

⁸⁷ *Id.*

⁸⁸ Paul Kagan Assocs., *The Public Market*, The Cable TV Financial Databook 1999, Aug. 1999, at 98; *Marketplace*, Cable World, June 28, 1999, at 38.

⁸⁹ Paul Kagan Assocs., *The Public Market*, The Cable TV Financial Databook 1999, Aug. 1999, at 98.

⁹⁰ Raymond Lee Katz, *Cable R&R: Investment Risk & Reward in Cable Broadband*, Bear Stearns, May 1999, at 8 (“Katz, *Cable R&R*, May 1999”).

35. Several market analysts believe cable stocks are not yet fully valued.⁹¹ Some assert that the stock market is ignoring the positive impact of new services such as video on demand, high-speed data, telephony, and multiple product packaging.⁹² Other analysts, however, indicate that deployment of these new services could be the largest single fundamental risk to cable stock valuations.⁹³ Some analysts assert that the benefits of successful deployment of new services will likely drive cable stocks in 2000, improving equity values by as much as 20% to 30%.⁹⁴

3. Capital Acquisition and Disposition

36. **Industry Financing.** The cable industry has typically relied on combinations of private and public financing, with the exact 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.

37. Between July 1, 1998, and December 31, 1998,⁹⁵ the cable industry acquired \$3 billion in private debt financing (i.e., financing received from banks, insurance companies, and other institutional investors).⁹⁶ In the second half of 1998, the industry acquired \$998 million in net new public debt issue.⁹⁷ The industry obtained its remaining financing from individuals, private corporations, venture capital firms, investment banks, and public equity offerings (i.e., stock markets). There was no significant financing activity in the private markets in the second half of 1998, but public markets produced \$250.3 million.⁹⁸

38. Between January 1999 and June 1999, the industry acquired \$13.6 billion in private debt, compared with \$1.5 billion for the same period in 1998.⁹⁹ Public debt also increased between January 1999 and June 1999, when compared to the same period in 1998.¹⁰⁰ Net new public debt issued for the first half of 1999 reached approximately \$8.8 billion, while debt issued for the same period in 1998 reached

⁹¹ Katz, *Cable R&R*, May 1999, at 8; Richard Bilotti, Marc Nabi, and Gary Lieberman, *Cable Television/Satellites: 1Q99 Review and 2Q99 Preview*, Morgan Stanley Dean Witter, Apr. 12, 1999, at 1.

⁹² Katz, *Cable R&R*, May 1999, at 8; Raymond Lee Katz, *The Model Is Working*, Bear Stearns, Aug. 1999, at 1, 5 (“Katz, *Model*, Aug. 1999”).

⁹³ Katz, *Model*, Aug. 1999, at 1, 5.

⁹⁴ Katz, *Cable R&R*, May 1999, at 8.

⁹⁵ The 1998 data may not agree with data for the same date(s) in our *1998 Report* because the data have been revised by the source.

⁹⁶ Paul Kagan Assocs., Inc., *Cable TV Financing Snapshot*, Cable TV Finance, Sept. 9, 1998, at 7; Oct. 13, 1998, at 6; Nov. 20, 1998, at 5; Dec. 7, 1998, at 9; Dec. 31, 1998, at 6; Dec. 31, 1998, at 5.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ Paul Kagan Assocs., Inc., *June 1999 Cable Financing Snapshot*, Cable TV Finance, June 30, 1999, at 8.

¹⁰⁰ *Id.*

approximately \$4.4 billion.¹⁰¹ Private equity generated from January 1999 through June 1999 was \$27.5 million, whereas private debt generated during the first six months of 1998 reached \$135.5 million.¹⁰²

39. **Capital Expenditures/Capital Investment.** In 1998, the cable industry spent a total of \$7.7 billion on the construction of new plant, upgrades, rebuilds, new equipment, and maintenance of new and existing equipment.¹⁰³ This represents a 13.2% increase over the \$6.8 billion spent in 1997 for investments in plant and equipment, and for the expense of maintaining these investments.¹⁰⁴ Analysts expect that in 1999, operators will spend an estimated \$10.8 billion by year's end, an increase of 40.9% over 1998.¹⁰⁵ Of the \$7.7 billion spent in 1998, approximately \$981 million was for maintenance expense, \$600 million for new builds,¹⁰⁶ \$1.8 billion for rebuilds,¹⁰⁷ \$2.5 billion for upgrades,¹⁰⁸ and \$1.8 billion for equipment.¹⁰⁹ Upgrades and rebuilds (i.e., the improvement of existing plant) continue to account for most of the capital expenditures made in the past few years, including projections for year-end 1999. Between 1995 and 1998, investment in the improvement of existing plant has increased by an average of 20% each year.¹¹⁰ Operators invested \$3.7 billion in 1997, and \$4.3 billion in 1998.¹¹¹ By year-end 1999, analysts expect expenditures for rebuilds and upgrades to increase approximately 67%, to \$7.2 billion.¹¹²

40. In 1998, many of the large MSOs spent more than half billion dollars each on upgrades and rebuilds. In the case of three of the MSOs, some or all of the expenditures in 1998 fulfilled commitments made by those MSOs pursuant to social contracts with the Commission.¹¹³ In addition, over the past four

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ Paul Kagan Assocs., Inc., *Estimated Capital Flows in Cable TV*, Cable TV Financial Databook, Aug. 1999, at 149.

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ "New builds" are the construction of new cable plant where none existed before.

¹⁰⁷ "Rebuilds" are improvements to existing systems that do not retain much of the old system plant and equipment. Instead, they consist of mostly new plant and equipment.

¹⁰⁸ "Upgrades" are improvements to existing cable systems that do not require the replacement of the entire existing plant and equipment.

¹⁰⁹ Paul Kagan Assocs., Inc., *Estimated Capital Flows in Cable TV*, Cable TV Finance, May 28, 1999, at 2.

¹¹⁰ *Id.*

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ The social contract with Time Warner committed that MSO to spend \$4 billion on upgrades over a five-year period and to provide 100% of its subscribers with 550 MHz service and 50% of its subscribers with 750 MHz service. *Social Contract for Time Warner*, 11 FCC Rcd 2788 (1995). Time Warner's annual social contract (continued....)

years Comcast has invested more than \$2 billion in system upgrades, an average of one half billion dollars per year.¹¹⁴ In 1999, Cox will invest approximately \$650 million in upgrades.¹¹⁵ Over the past four years, MediaOne has invested about \$4.1 billion in upgrading its plant, an average of \$1 billion each year.¹¹⁶ MediaOne estimates that it will have invested in excess of \$7 billion by year-end 2000.¹¹⁷ AT&T states that it has invested billions for network upgrades since acquiring TCI for \$48 billion.¹¹⁸ Cablevision has recently upgraded and rebuilt its systems, investing hundreds of millions of dollars.¹¹⁹

41. Expenditures for upgrades have resulted in increased system capacity. For example, Cox estimates that by year-end 1999, 65% of its plant will be upgraded to 750 MHz with two-way capacity, and an additional 11% of its systems upgraded to 550 MHz.¹²⁰ Comcast estimates that by year-end 1999, more than 85% of its customers will be receiving service at greater than 550 MHz and more than 63% will be receiving service at 750 MHz.¹²¹ In the first half of 1999, RCN added an average of 7.1 route miles of fiber optic network daily, in addition to other network upgrades.¹²²

(Continued from previous page) _____

implementation report indicates that the MSO is on track, having invested \$2.9 billion in the first three years of the contract. Letter from Stuart F. Feldstein to Deborah A. Lathen, Chief of the Cable Services Bureau, March 29, 1999. The social contract with MediaOne commits that MSO to spend \$1.7 billion on upgrades over a four-year period and also to provide 100% of its subscribers with 550 MHz service and 50% of its subscribers with 750 MHz service. *Social Contract for Continental Cablevision, Inc.* (subsequently MediaOne), 13 FCC Rcd 11118 (1996). By the end of 1998, MediaOne reported that it surpassed its financial commitment under the social contract, having spent more than \$2.5 billion during that period, and that it expected to fulfill its service levels commitment within the year. MediaOne Annual Progress Report to the Commission, April 7, 1999. The third MSO, Comcast reported that by March 31, 1999, it also fulfilled its social contract commitments of upgrading 80% of its subscribers to 550 MHz service and 60% to 750 MHz service. *Social Contract for Comcast Cable Communications, Inc.*, 13 FCC Rcd 3612 (1997); Third Annual Report of Comcast Cable, October 14, 1999.

¹¹⁴ Comcast Reply Comments at 4, 29, 30.

¹¹⁵ Letter from James Hatcher, General Counsel, Cox Communications, Inc., to Anne Levine, Federal Communications Commission, Sept. 20, 1999 (“Hatcher Letter”).

¹¹⁶ *Transfer of Control of FCC Licenses MediaOne Group, Inc. to AT&T Corp.*, CS Docket No. 99-251, Transfer of Control of Applications, July 7, 1999 at 15 (“AT&T/MediaOne Application”).

¹¹⁷ MediaOne Comments at 15.

¹¹⁸ AT&T Comments at 22.

¹¹⁹ Cablevision Reply Comments at 2.

¹²⁰ Hatcher Letter.

¹²¹ *Id.*

¹²² RCN Reply Comments at 2. RCN is a competitive local exchange carrier (“CLEC”) that provides video primarily as an open video system (“OVS”) operator in the New York, New Jersey, Philadelphia, Boston, and Washington, D.C. areas. RCN also provides cable television service in most of its OVS markets. RCN Comments, Summary, at i-ii.

4. Other Performance Indicators

42. **Cable System Transactions.** The number of mergers, acquisitions, and exchanges between MSOs has fluctuated over the past few years. The number of systems sold increased between 1997 and 1998 from 110 to 114 systems.¹²³ One data source recorded 60 transactions from January 1999 through June 1999.¹²⁴ Many of these transactions are the result of MSOs' ongoing efforts to regionalize, or "cluster," their operations for the economic advantages to be gained by such aggregation.¹²⁵ The total number of subscribers affected by system transactions and the average size (measured by the number of subscribers per system) of systems sold continues to vary greatly from year to year.

43. The average system size increased 74.9% from 112,616 subscribers per system sold in 1997 to 197,001 subscribers per system sold in 1998.¹²⁶ Between January and June 1999, the average number of subscribers per system transaction was 258,535, a half-year increase of over 31.2%.¹²⁷ The total number of subscribers affected by system transactions in 1998 increased 81.3%, from nearly 12 million subscribers in 1997 to approximately 22 million subscribers in 1998.¹²⁸ Between January 1999 and June 1999, about 15 million subscribers were affected by system transactions.¹²⁹ The total dollar value of transactions increased 191.1% from \$22.2 billion at year-end 1997 to 64.6 billion at year-end 1998.¹³⁰ The average dollar value per subscriber of transactions was approximately \$3,900 between January 1999 and June 1999.¹³¹

44. **Overbuilding.** From 1995, when overbuild activity began to increase, to 1999, competing franchises have been awarded covering 210 communities in 28 states, with the potential to pass 8.3 million homes.¹³² However, not all of the franchises awarded are currently operational. After a franchise is awarded, it can take a significant amount of time for the franchisee to build, or gain access to, a network over which to provide video service. For example, as of June 1999, Ameritech held 108 franchises but offered service in only 90 communities. Ameritech has the potential to pass 1.7 million homes in these 108

¹²³ This includes all systems bought and sold. See App. B, Tbl. B-9.

¹²⁴ Some transactions recorded on this table have been announced to the public but may not actually take place. Most recorded transactions do take place, although a few each year do not. See App. B, Tbl. B-9.

¹²⁵ See ¶¶ 161-165 *infra*.

¹²⁶ See App. B, Tbl. B-9.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² Paul Kagan Assocs., Inc., *Cable TV Franchising Competition, 1995-1998 Franchise Awards*, Cable TV Financial Databook, 1999, at 87-90.

franchise areas. As of August 1999, Ameritech had increased its subscribership to 250,000, from 150,000 subscribers in August 1998.¹³³

45. In addition, BellSouth offers service in all or parts of 12 of its 21 franchise areas. GTE offers service in three of its nine franchise areas. U S West offers service in four of its five franchise areas, and SNET offers service in 12 areas covered by its statewide franchise in Connecticut. These LEC overbuilders are competing with MSOs such as TCI, Time Warner, Jones Intercable, Comcast, Cox, MediaOne, and Rifkin.

46. Among the smaller firms awarded competing franchises is KnoLogy Holdings, Inc., which holds 21 franchises¹³⁴ in four southeastern states.¹³⁵ KnoLogy is competing with incumbent cable operators, such as Charter Communications, TCI, Jones Intercable, Comcast, Time Warner, and Marcus Cable. It offers its customers “one stop shopping” for cable service, high-speed Internet access, and local and long distance telephone connections.¹³⁶ Buckeye CableSystem (Buckeye) offers service in 17 of its 19 Ohio franchise areas, and is constructing systems in the remaining two franchise areas of Waterville and Northwood, Ohio. Buckeye is also negotiating for a twentieth franchise in nearby Bedford, Michigan. With the Waterville, Northwood, and Bedford systems, Buckeye would compete head-to-head with incumbent FrontierVision.¹³⁷ Buckeye intends to offer cable television service, cable-modem service, and local telephone service through cable.

47. Since our *1998 Report*, other planned overbuilds include Intertech Private Cable, which will compete head-to-head with Adelphia in Kenmore, New York. It will offer ten more channels than Adelphia at a rate that is \$5 less than Adelphia’s current rate. 21st Century has invested \$250 million in fiber network in a portion of Chicago, where it offers cable television, Internet access, and telephone service.¹³⁸ 21st Century plans to propose overbuilds in other portions of Chicago to compete head-to-head with AT&T. As of June 30, 1999, RCN passed 425,000 homes and served 270,000 OVS and cable subscribers. RCN provides service to areas surrounding the City of Boston, the New York City metropolitan areas, and the surrounding areas of Washington, D.C.¹³⁹ RCN plans to extend its operations to San Francisco in late 1999 and to Philadelphia sometime in 2000. RCN offers Internet access, and local and long distance telephone, as well as video services.¹⁴⁰

¹³³ Ameritech Comments at 1.

¹³⁴ KnoLogy Facts, Oct. 1998.

¹³⁵ Charles Haddad, *KnoLogy Lays Low, Dreams Big*, Atlanta Journal-Constitution, Oct. 21, 1998.

¹³⁶ John P. McDermott, *Getting Connected*, Charleston Post and Courier, Oct. 26, 1998, at 10-D.

¹³⁷ Joe Estrella, *Buckeye Will Take On FrontierVision*, Multichannel News, Feb. 15, 1999, at 1.

¹³⁸ Linda Haugsted, *Adelphia Has New Rival Near Buffalo*, Multichannel News, Apr. 12, 1999, at 22.

¹³⁹ See ¶¶ 129-130 *infra*.

¹⁴⁰ Alan Breznick and Joshua Cho, *Vulcan Upsets Cable Paradigm*, Cable World, Oct. 11, 1999, at 53.

48. New municipal overbuild activity continues to grow. In Wadsworth, Ohio, the city's system had 2,228 customers as of March 1, 1999.¹⁴¹ The city of Lebanon, Ohio, began serving cable subscribers on March 8, 1999. Both of these Ohio systems are competing with the incumbent cable operator, Time Warner.¹⁴² Among municipalities planning overbuilds are Little Rock, Arkansas, and the surrounding communities of North Little Rock, Jacksonville, Maumelle, and Sherwood. A municipal consultant has recommended that the communities build a state-of-the-art, two-way system that would provide 88 analog channels, 28 digital channels, and high-speed Internet service. Local government officials report that these communities are likely to build such a system to compete with incumbent cable operator, Comcast. In addition, they have indicated that they plan to compete by providing better service at a lower price.¹⁴³ Other communities, such as Palo Alto, California, Hastings, Nebraska, and Spencer, Iowa, are also considering overbuilding.

49. An indication that an overbuilt system may be in operation occurs when an incumbent provider asks the Commission to determine that effective competition exists within its service area. Such a determination exempts the cable operator from regulation of its rates. Since 1995, the Commission has granted 63 petitions for determination of effective competition status on the basis of overbuild competition. As we have done in recent reports, we again provide a study of selected areas where incumbent cable operators face head-to-head effective competition.¹⁴⁴ Our case-by-case analysis shows that such competition often results in lower prices, additional channels at the same monthly rate, improved services, or additional nonvideo services.¹⁴⁵

50. Several commenters seeking to overbuild incumbent cable systems cite barriers to entry into the video distribution marketplace.¹⁴⁶ In particular, CCC, a coalition of wireline and wireless overbuilders, raises a number of issues regarding laws and regulations that it claims inhibit its members' ability to introduce competitive cable systems.¹⁴⁷ CCC contends that potential overbuilders have inadequate access to programming because of exclusive contracts between cable operators and unaffiliated programmers and the failure of the program access law to cover programming distributed over terrestrial facilities.¹⁴⁸ It argues that its members face discriminatory programming prices because programmers offer discounts only to the

¹⁴¹ Linda Haugsted, *City Happy with Its System in Wadsworth*, Multichannel News, Mar. 8, 1999, at 24.

¹⁴² Monica Hogan, *Municipal Overbuild Hits 2nd Ohio Town*, Multichannel News, Mar. 8, 1999, at 24.

¹⁴³ Mike Farrell, *Little Rock Ready to Roll on Cable*, Multichannel News, Jan. 4, 1999, at 3.

¹⁴⁴ See ¶¶ 217-243 *infra*.

¹⁴⁵ See ¶¶ 244-248 *infra*.

¹⁴⁶ See, e.g., ¶¶ 77-80, 91, 132-134 *infra*.

¹⁴⁷ Members of CCC include: Ameritech New Media, Inc.; BellSouth Entertainment, Inc.; DTG McLeod USA; Hiawatha Broadband Communications; Knology Holdings, Inc.; Lexcom Cable; Mainstreet Communications; OmniMedia Associates; RCN Corporation; Seren Innovations, Inc.; 21st Century Telecom Group, Inc.; and Unitel Communications. See CCC Reply Comments.

¹⁴⁸ *Id.* at 9-17.

largest MSOs.¹⁴⁹ In addition, CCC claims that cable operators use a number of tactics to hinder competition in MDUs, including: (a) forcing competitors to postwire MDUs with a duplicate set of wiring; (b) refusing to remove or relocate lock boxes that prevent access to existing home wiring; and (c) securing perpetual, exclusive contracts to serve MDUs.¹⁵⁰

5. Provision of Advanced Broadband Services

51. Since our last report, cable operators have been upgrading their networks and offering new services at a rapid pace.¹⁵¹ Some analysts estimate that most cable plant upgrades will be completed over the next two years.¹⁵² With these improvements to cable infrastructure, the marketing of new services such as digital video, telephony, and data access, is projected to grow significantly over the next several years.¹⁵³

52. **Digital Video Services.** Digital signal transmission, as compared to the analog signal transmission historically used in cable systems, can provide superior video picture quality and increased channel capacity through compression techniques.¹⁵⁴ Accordingly, digital consumers can receive clearer video pictures, as well as more programming options and advanced service offerings such as electronic programming guides and video-on-demand.¹⁵⁵ Some analysts anticipate market trials of video-on-demand through digital set-top boxes in late 1999,¹⁵⁶ but predict that video-on-demand will not be offered in commercial rollouts by operators until at least 20% of all cable subscribers have digital set-top boxes.¹⁵⁷

53. Subscriber reception of digital video signals requires a set-top device to decompress and decode incoming signals and to translate the digital signals into the analog signals used by current television

¹⁴⁹ *Id.* at 17-23.

¹⁵⁰ *Id.* at 23-28.

¹⁵¹ Jessica Reif Cohen and Nathalie Brochu, *Cable Television: Q2 Preview*, Merrill Lynch, July 16, 1999, at 8 (“Cohen and Brochu, *Q2 Preview*, July 16, 1999”).

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ See *1998 Report*, 13 FCC Rcd at 24312 ¶ 48. Digital video is more likely to maintain signal integrity than analog video. As video signals travel from the cable operator to the subscriber, signals risk interference from equipment leaks or other hardware factors. Digital signals are composed of discrete codes of information and carry error-correcting codes that can regenerate any lost data. Analog signals can be amplified, but little can be done to correct any distortion that may occur to the signal through transmission. In allocating bandwidth to digital video, an operator must determine the number of analog or otherwise unused channels to devote to digital video. In attempting to maximize the number of digital program channels per available bandwidth, operators have tried to maximize digital compression ratios.

¹⁵⁵ See <http://www.cox.com/DigitalTV>; http://www.cablevision.com/cvhome/frame/fcatv_a.htm. See also Denton Kanouff, *Building a Compelling Digital-Service Offering*, Multichannel News, Jan. 18, 1999, at 65.

¹⁵⁶ Cohen and Brochu, *Q2 Preview*, July 1999, at 27.

¹⁵⁷ Katz, *Cable R&R*, May 1999, at 60.

sets. Presently, cable operators provide set top devices to the consumer for a monthly fee, though these devices will soon become available to consumers through retail outlets.¹⁵⁸

54. As of December 1998, there were more than 1.2 million digital cable subscribers.¹⁵⁹ Some analysts estimate that by year-end 1999, there will be as many as 4.1 million digital cable subscribers.¹⁶⁰ Cox is marketing its digital product in seven states and has 144,116 subscribers.¹⁶¹ Cox offers three digital packages: movie, sports and information, and variety.¹⁶² Customers may purchase one package for \$5.95 or all three for \$10.95.¹⁶³ As of August 1999, Comcast served approximately 285,000 subscribers and expects to serve between 400,000 to 450,000 by the end of 1999.¹⁶⁴ Comcast offers digital video service in seven states.¹⁶⁵ Adelphia offers digital video in 25 of its systems.¹⁶⁶ AT&T offers digital video in 22 states.¹⁶⁷ MediaOne offers digital service in ten states, passing more than three million homes.¹⁶⁸

55. ***Internet and High-Speed Data Services.*** Currently, most Americans access the Internet using telephone lines at speeds of less than 56 kilobits-per-second (“Kbps.”)¹⁶⁹ In January 1999, 65% of

¹⁵⁸ See *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Report and Order, 13 FCC Rcd 14775 (1998). See also *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket 97-80, Order on Reconsideration, 14 FCC Rcd 7596 (1999).

¹⁵⁹ Cohen and Brochu, *Q2 Preview*, July 1999, at 25.

¹⁶⁰ *Id.*

¹⁶¹ Cox Communications, Inc., *Cox Communications Announces 2Q Financial Results for 1999* (press release), June 30, 1999. Cox offers service in California, Nebraska, Arizona, Connecticut, Virginia, Rhode Island, and Louisiana.

¹⁶² *Making Sense of Digital TV: Industry Addresses Penetration Compression Ratios*, Cable World, Mar. 23, 1998, at 36.

¹⁶³ *Id.*

¹⁶⁴ Comcast Reply Comments at 2, 10, 17.

¹⁶⁵ Paul Kagan Assocs., *Digital Deployments*, The Cable TV Financial Databook, Aug. 1999, at 84.

¹⁶⁶ *Id.*

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Broadband Today: A Staff Report to William E. Kennard, Chairman, Federal Communications Commission*, Cable Services Bureau, Federal Communications Commission, Oct. 1999, at 9 and App. A, *Breakdown of Online Universe 1999-2005* (“Broadband Report”). Many 56.6 Kbps telephone-line modems can be purchased for \$29.99-\$159.99. See http://www.bestbuy.com/product_info/products/models.asp?C=39&P=N. The typical cost of service from an Internet service providers is under \$6.95-\$26.95 per month depending on the features of the service. See <http://register.mindspring.com/cgi-bin/wsisa.dll/signup/signup1.w>; see also <http://www.erols.com/promo/signup.htm>.

Internet users were using analog telephone dial-up modems with an average speed of access of 33 Kbps.¹⁷⁰ It is projected that telephone dial-up will remain the principal means of accessing the Internet for at least the next several years.¹⁷¹ However, as we have reported in the past, broadband technologies¹⁷² allow users to access the Internet at much greater speeds.¹⁷³

56. The most popular way to access the Internet over cable broadband infrastructure is through the use of a cable modem and personal computer, with information transmitted over the cable system's wires.¹⁷⁴ Cable broadband infrastructure accessed through cable modems allows users to access the Internet at speeds that range from fifty to several hundred times faster than telephone dial-up.¹⁷⁵ Cable systems and cable modems are reportedly able to offer speeds of up to 27 megabits-per-second ("Mbps").¹⁷⁶ However, because cable broadband network capacity is shared among users, and because of the hardware limitations, most connections are closer to one to ten Mbps.¹⁷⁷

57. As reported last year, Cable Television Laboratories ("CableLabs") was founded in 1988 by a consortium of cable operators in North and South America.¹⁷⁸ Established to provide a clearinghouse for technological information, CableLabs created the cable modem standard, DOCSIS (Data Over Cable Service Interface Specification), in an effort to ensure practicality and accessibility of cable modem technologies.¹⁷⁹ Equipment conforming to the DOCSIS standard is eligible to be CableLabs Certified.¹⁸⁰ On April 22, 1999, CableLabs issued the DOCSIS 1.1 specification, defining new standards for cable modem functionality that allow cable operators to provide guaranteed bandwidth.¹⁸¹ This development follows the passage of

¹⁷⁰ Broadband Report at 23, App. A, Breakdown of Online Universe 1999-2005.

¹⁷¹ *Id.*

¹⁷² Broadband technologies include cable broadband, telephone company digital subscriber line ("DSL"), broadband wireless, and broadband satellite.

¹⁷³ *1998 Report*, 13 FCC Rcd at 24313 ¶ 52. Broadband Report at 16-19.

¹⁷⁴ The other means of accessing the Internet over cable broadband infrastructure is through the television using special equipment, as discussed in ¶ 64 *infra*.

¹⁷⁵ Broadband Report at 9, 18.

¹⁷⁶ *1998 Report*, 13 FCC Rcd at 24313 ¶ 52.

¹⁷⁷ Kinetic Strategies, Inc., *Cable Modem FAQ*, Cable Datacom News, <http://www.cabledatacomnews.com/cm/cmic2.html>; Broadband Report at 19.

¹⁷⁸ *1998 Report*, 13 FCC Rcd at 24318 ¶ 57; Cable Television Laboratories, Inc. ("CableLabs"), *What is CableLabs?*, http://www.cablelabs.com/start_here/. See also ¶¶ 212-214 *infra*.

¹⁷⁹ *Id.*

¹⁸⁰ CableLabs, *Bukovinsky Selected to Blend CableLab's Packet Cable and Cable Modem Initiatives* (press release), Sept. 9, 1999.

¹⁸¹ CableLabs, *CableLabs Issues Specifications for DOCSIS 1.1 Modems* (press release), Apr. 22, 1999.

DOCSIS 1.0 on March 18, 1998, which encompassed data privacy and service protection and also allowed high-speed modems to be certified for retail sale.¹⁸² There are now thirteen modem suppliers whose products have been certified for retail sale.¹⁸³

58. Internet access via a cable modem enables access to a wide array of services including Web browsing, e-mail, streaming audio and video, local content, and CD-ROM servers.¹⁸⁴ Last year, we reported that as of August 31, 1998, more than 15 million homes were passed by Internet access service through cable modem technology, with approximately 300,000 subscribers.¹⁸⁵ As of July 1999, cable modem service was available to 32 million homes in the United States and Canada with more than 1 million subscribers by July 1999.¹⁸⁶ More than 90 percent of these subscribers receive “two-way” service, meaning that data transmission is carried over cable broadband infrastructure in both directions. The remaining 10 percent are served by systems that provide data transmission over cable in the downstream direction (i.e., to the consumer) and telephone line transmission in the upstream direction (i.e., back to the cable operator).¹⁸⁷

59. Virtually all the major MSOs offer Internet access via cable modems in portions of their nationwide service areas.¹⁸⁸ Unlike high-speed access offered through a telephone company, the cable Internet service provider (“ISP”) is selected on a national basis by the individual MSO and offered to customers on a regional basis. Road Runner and Excite@Home¹⁸⁹ are still the leading cable ISPs.¹⁹⁰ As of September 30, 1999, @Home reported 840,000 cable modem subscribers, a 300 percent increase since

¹⁸² CableLabs, *International Telecommunications Union Approves DOCSIS Modem Standard* (press release), Mar. 19, 1998; CableLabs, *CableLabs Issues Specifications for DOCSIS 1.1 Modems* (press release), Apr. 22, 1999.

¹⁸³ CableLabs, *CableLabs Certifies Best Data and Com 21 Modems, Re-certifies GI and RCA Modems, Re-qualifies Cisco CMTs* (press release), Dec. 9, 1999.

¹⁸⁴ Kinetic Strategies, Inc., *Cable Modem FAQ*, Cable Datacom News, <http://www.cabledatcomnews.com/cm/cmic2.html>.

¹⁸⁵ See *1998 Report*, 13 FCC Rcd at 24316 ¶ 55.

¹⁸⁶ Kinetic Strategies, Inc., *Cable Modem Market Stats & Projections*, Cable Datacom News, <http://www.cabledatcomnews.com/cm/cmic16.html>.

¹⁸⁷ *Id.*

¹⁸⁸ See App. B, Tbl. B-10. This list is not exhaustive. The MSOs listed here are examples of cable operators currently providing Internet access to subscribers in some of their service areas.

¹⁸⁹ On May 28, 1999, @Home completed its merger with media services company Excite to form Excite@ Home.

¹⁹⁰ As reported last year, Excite@ Home and Road Runner are technologically different from other cable ISPs in that each provide its own local network and own routing and caching (storage) servers, allowing for increased access to popular content. See *1998 Report*, 13 FCC Rcd at 24316 ¶ 56.

September 30, 1998.¹⁹¹ As of September 30, 1999, Road Runner had 420,000 subscribers.¹⁹² Other cable ISPs include High Speed Access Corporation, The ISP Channel, and Online System Services Inc.¹⁹³

60. As of June 1999, Cox offered @Home service to 3.2 million homes, and was serving 112,000 subscribers.¹⁹⁴ Comcast offers @Home service to 2.4 million households, or 43.6 % of Comcast subscribers.¹⁹⁵ As of August 1999, Comcast had 100,000 customers with three to five additional markets and 30,000 additional customers expected by year-end 1999.¹⁹⁶ Adelphia offers Internet access in nine states, passing more than 425,000 homes.¹⁹⁷ Bresnan offers Internet access in three states, passing over 120,000 homes with two-way service.¹⁹⁸ AT&T passes more than 1.6 million homes with @Home service in six states.¹⁹⁹ MediaOne passes more than 5.8 million homes in fifteen states.²⁰⁰ Cablevision Systems offers @Home service to over 650,000 homes in Connecticut and Long Island, New York.²⁰¹ Charter offers Internet access through numerous ISPs, including High Speed Access Corporation, @Home, and Earthlink.²⁰² Charter passes over 300,000 homes with Internet Access.²⁰³ RCN offers Internet access service in Massachusetts, Pennsylvania, New York City, New Jersey, Maryland, and Washington, DC.²⁰⁴ Time Warner offers Road Runner Internet access service in nine states passing over 3.8 million homes.²⁰⁵

¹⁹¹ At Home Corporation, *Excite@ Home Reports ThirdQuarter 1999 Results* (press release), Oct. 19, 1999.

¹⁹² Time Warner Inc., *Time Warner Businesses Report Record Third Quarter* (press release), Oct. 13, 1999.

¹⁹³ Kinetic Strategies, Inc., *Cable Internet Service Providers and Systems Integrators*, Cable Datatcom News, <http://www.cabledatcomnews.com/cm/cmic/cm5.html>.

¹⁹⁴ Cox Communications, Inc., *Cox Communications Announces Second Quarter Financial Results for 1999* (press release), June 30, 1999.

¹⁹⁵ Comcast Reply Comments at 17, 18; Mike Farrell, *Digital, QVC Drive Comcast Results*, Multichannel News, Mar. 1, 1999, at 49.

¹⁹⁶ *Id.*

¹⁹⁷ Paul Kagan Assocs., *Cable Modem Launches*, The Cable TV Financial Databook, Aug. 1999, at 78.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ MediaOne Comments at 2, 15.

²⁰¹ Paul Kagan Assocs., *Cable Modem Launches*, The Cable TV Financial Databook, Aug. 1999, at 78.

²⁰² *See* App. B, Tbl. B-10

²⁰³ Paul Kagan Assocs., *Cable Modem Launches*, The Cable TV Financial Databook, Aug. 1999, at 78.

²⁰⁴ RCN Comments at 3.

²⁰⁵ Paul Kagan Assocs., *Cable Modem Launches*, The Cable TV Financial Databook, Aug. 1999, at 78.

61. Although wireless and satellite broadband technologies exist, telephone company xDSL²⁰⁶ technologies currently are the most significant competitors to Internet over cable broadband.²⁰⁷ Reported to offer consumers data speeds between 1.5 Mbps and 52 Mbps, most users experience between only 1.5 and 8 Mbps for ADSL, the most widely used form of xDSL.²⁰⁸ As we reported last year, xDSL technology has several advantages over cable broadband technology.²⁰⁹ Among the advantages is the ability to offer customers simultaneous, high-speed Internet and voice or facsimile capabilities over a single telephone line.²¹⁰ Dedicated lines that run from the telephone subscriber's home to the central office can guarantee the user a constant, high-speed rate of data transmission and security.²¹¹ This means that there is no decrease in data transfer speeds as more users get online, unlike cable's shared network.

62. Last year, we reported that in addition to the greater availability of Internet access over cable, the generally lower price for cable Internet access was an important difference between cable and high-speed telephone company products.²¹² Currently, the number of xDSL subscribers is significantly less than the number of cable broadband subscribers.²¹³ By June 1999, there were 159,150 xDSL subscribers²¹⁴ compared to more than one million cable Internet access subscribers.²¹⁵ The rollout of DSL and other broadband technologies, however, is accelerating.²¹⁶ Analysts predict that over 30 million telephone lines will be able to support xDSL services by the end of 1999,²¹⁷ compared to the nearly 32 million homes passed by Internet access over cable.²¹⁸ Several telephone companies recently announced plans to

²⁰⁶ The acronym "xDSL" refers to a general class of digital subscriber line technologies. We report on ADSL because it is the most feasible for mass market deployment at this time. Another type of xDSL technology is VDSL which, unlike ADSL, cannot function over sustained distances. VDSL is the fastest of xDSL technologies, performing at rates of up to 52 Mbps, but cannot function over sustained distances like ADSL.

²⁰⁷ See generally Broadband Report at 23-30.

²⁰⁸ Jonathan Atkin and Daniel Ernst, *Bring on the Bandwidth: An Investor's Guide to Competitive Broadband Services*, Ferris, Baker Watts, Inc., July 1999, at 54 ("Atkin, July 1999").

²⁰⁹ *1998 Report*, 13 FCC Rcd at 24314 ¶ 52.

²¹⁰ Broadband Report at 21; *1998 Report*, 13 FCC Rcd at 24314 ¶ 52.

²¹¹ *Id.*

²¹² *1998 Report*, 13 FCC Rcd at 24314 ¶ 53.

²¹³ Broadband Report at 9.

²¹⁴ *Id.* at 28.

²¹⁵ Kinetic Strategies, Inc., *Cable Modem Market Stats & Projections*, Cable Datatcom News, <http://www.cabledatcomnews.com/cm/cmic16.html>.

²¹⁶ Broadband Report at 25.

²¹⁷ *Id.* at 28.

²¹⁸ Kinetic Strategies, Inc., *Cable Modem Market Stats & Projections*, Cable Datatcom News, <http://www.cabledatcomnews.com/cm/cmic16.html>.

aggressively expand their xDSL service areas.²¹⁹ For example, SBC will increase xDSL availability to over 10 million homes by the end of 1999²²⁰ and has committed to make broadband services available to 80% of its customers over the next three years.²²¹

63. In the last year, the price difference between cable Internet access and xDSL service has narrowed. DSL providers now offer service for as low as \$19.95 a month. For example, U S West offers a service guaranteeing downstream data transfer rates of 256 Kbps for \$19.95.²²² Bell Atlantic offers a service guaranteeing data transfer rates of 640 Kbps downstream and 90 Kbps upstream for \$49.95 per month.²²³ It also offers a service delivering a guaranteed 1.6 Mbps downstream and 90 Kbps upstream for \$99.95 per month.²²⁴ By comparison, @Home cable Internet access is priced at \$39.95 per month and offers transfer speeds of up to 1.5 Mbps downstream and 128 Kbps upstream.²²⁵ However, because bandwidth on cable networks is shared among users, most @Home users experience data transfer rates of approximately 128 Kbps downstream.

64. In addition, as we have reported in the past, a small portion of cable Internet access is delivered through a television receiver rather than a personal computer.²²⁶ Such services are provided using a dedicated browsing device that communicates with the cable set-top box to offer basic applications such as e-mail, Web browsing and “hyperlinking” technology.²²⁷ These services are typically priced at

²¹⁹ See, e.g., <http://www.bellsouthcorp.co/proactive/documents/render/30523.vtml>; <http://www.ba.com/nr/1999/Oct/19991006004.html>; <http://www.cabledatacomnes.com/nov99/nov99-5.html>.

²²⁰ Broadband Report at 28.

²²¹ SBC Communications, Inc., *SBC First to Surpass 10,000 DSL Subscribers* (press release), Nov. 4, 1999. However, it is unclear whether any of these xDSL offerings will contain a multichannel video component. Currently we are aware of no xDSL offering, other than a trial by U S West in Phoenix, that contains a multichannel video component.

²²² U S West offers a service for \$19.95 per month that delivers 256 Kbps downstream. See U S West, *MegaBit 256 Select: Comparison of Dial-up & MegaBit Services*, <http://www.uswest.com/home/offers/megabit/comparison.html>.

²²³ Bell Atlantic Corporation, *Infospeed DSL and Bell Atlantic.net Pricing*, http://www.bellatlantic.com/infospeed/more_info/pricing.html.

²²⁴ *Id.*

²²⁵ At Home Corporation, *Telephone Call to @Home Customer Service*, at 1-888-824-8101. See also GTE Corporation, *DSL Access*, <http://www.gte.net/pands/residential/dslpricing2.html>.

²²⁶ *1998 Report*, 13 FCC Rcd at 24315 ¶ 54.

²²⁷ Atkin, July 1999, at 80; *1998 Report*, 13 FCC Rcd at 24315-6 ¶ 54. Hyperlinking, in this context, is the technology that combines broadcast or cable television and telephone Internet connections to offer consumers access to supplemental information to television shows, one-button ordering, and the ability to play along with television shows when applicable.

approximately \$10 per month.²²⁸ Providers of such service are WebTV and Worldgate.²²⁹ Wink Communications offers a similar product marketed primarily as an interactive tool for the enhancement of multichannel video programming.²³⁰

65. **Telephone Services Offered by MSOs.** Opportunities for telephony over cable have contributed to the consummation of several large transactions over the past year, including AT&T's purchase of Tele-Communications, Inc., and its proposed purchase of MediaOne.²³¹ While operators have the technological ability to upgrade cable networks to offer reliable, circuit-switched cable telephony, the AT&T-TCI merger promised deployment of IP telephony.²³² An IP telephony voice call and a cable telephony voice call both begin with special equipment that connects a household's twisted pair infrastructure with its cable infrastructure.²³³ 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 network of the Internet for IP processing.²³⁴ 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 the path of least resistance.²³⁵

66. Rather than offering circuit-switched cable telephony services and creating separate telephony and high-speed data architectures, many cable operators over the past year have responded to growing market demand for high-speed Internet access, with plans to combine both telephony and high-speed data access into one integrated multi-service communications platform.²³⁶ However, before IP telephony can be deployed, a number of technical hurdles remain. Currently, CableLabs is managing a project called PacketCable, aimed at identifying, qualifying, and supporting products that support Internet

²²⁸ Atkin, July 1999, at 80.

²²⁹ For an explanation of how the WebTV and Worldgate services operate, *see 1998 Report*, 13 FCC Rcd at 24315-6 ¶ 54.

²³⁰ Raymond Lee Katz and Adria Markus, *Wink Communications: Think Wink!*, Bear Stearns, Sept. 23, 1999.

²³¹ Richard Bilotti, Marc E. Nabi, and Gary Lieberman, *Cable Television/Satellite Communications: 1Q99 Review and 2Q99 Preview*, Morgan Stanley Dean Witter, Apr. 12, 1999, at 9.

²³² *Id.* Kinetic Strategies, Inc., *Cable IP Telephony Primer*, Cable Datacom News, at <http://www.cabledatacomnews.com/internetv/cm17.html>.

²³³ *1998 Report*, 13 FCC Rcd at 24320 ¶ 58.

²³⁴ *Id.*

²³⁵ *Id.* "The path of least resistance" refers to the manner in which Internet data travels. In order to move important or large amounts of data from one location to another quickly, regardless of failures or delays in traditional communications networks, data packets over the Internet take any path that does not resist transfer. The path of least resistance is not always the shortest path, but it is the most reliable path for the mass transfer of data.

²³⁶ Kinetic Strategies, Inc., *Cable IP Telephony Primer*, CableDatacom News, <http://www.cabledatacomnews.com/internetv/cm17.html>.

over cable-based multimedia services such as IP telephony.²³⁷ On March 12, 1999, the first of a series of PacketCable specifications was released.²³⁸ In September 1999, CableLabs participants conducted a series of PacketCable interoperability tests, drawing closer to PacketCable standards implementation.²³⁹ Operators like AT&T are beginning to develop and test the necessary equipment to provide IP telephony, though no plans for deployment have been announced.²⁴⁰

67. While many cable operators are waiting for the development of IP telephony, others offer circuit-switched cable telephony. As of June 1999, Cox's residential telephone service, "Cox Digital Telephone," was available in six markets, passing 870,213 homes and serving 59,793 subscribers.²⁴¹ Comcast recently announced an agreement with AT&T to collaborate on local exchange telephone service through AT&T-branded telephony in Comcast markets.²⁴² Through its controlling interest in Jones Communications, Comcast serves 12,000 telephone subscribers in Prince George's County, Maryland, and Alexandria, Virginia.²⁴³ Comcast also offers facilities-based telephony service on its systems in Ft. Lauderdale, Florida, and Baltimore, Maryland.²⁴⁴ Comcast anticipates that IP telephony will replace current circuit-switched offerings.²⁴⁵ MediaOne offers telephony in five states passing more than 3.6 million homes.²⁴⁶ Through its wholly-owned subsidiary, Lightpath, Cablevision provides facilities-based telephone services to Long Island and Connecticut and plans to offer this service in all of its markets.²⁴⁷ AT&T provides facilities-based telephony to approximately 15,000 subscribers in Fremont, California, Arlington Heights, Illinois, Dallas, Texas, and Hartford, Connecticut.²⁴⁸

²³⁷ CableLabs, *Bukovinsky Selected to Blend CableLab's Packet Cable and Cable Modem Initiatives* (press release), Sept. 9, 1999.

²³⁸ CableLabs, *CableLabs Issues Specifications for DOCSIS 1.1 Modems* (press release), Apr. 22, 1999.

²³⁹ CableLabs, *CableLabs Completes Another Round of Packet Cable Interoperability Testing* (press release), Oct. 5, 1999.

²⁴⁰ AT&T/MediaOne Application at 25.

²⁴¹ Cox Communications, Inc., *Cox Communications Announces Second Quarter Financial Results for 1999* (press release), June 30, 1999.

²⁴² Comcast Reply Comments at 21.

²⁴³ *Id.*

²⁴⁴ *Id.*

²⁴⁵ Comcast Reply Comments at 20, 21.

²⁴⁶ Paul Kagan Assocs., *Telephony Launches*, The Cable TV Financial Databook, Aug. 1999, at 71.

²⁴⁷ Cablevision Comments at 1.

²⁴⁸ AT&T/MediaOne Application at 34.

68. **Multi-Service Offerings.** Analysts believe that bundling of multiple services,²⁴⁹ offered either entirely over an operator's own network, or over a combination of its own network and a leased network, reduces churn,²⁵⁰ and increases equity values.²⁵¹ The financial impact of bundling video, voice, and data, can lower an operator's marginal risk, and provide customers with the convenience of "one-stop" shopping.²⁵² However, it is believed that ubiquity for bundling will not occur for at least several years.²⁵³

B. Direct Broadcast Satellite Services

69. Direct broadcast satellite ("DBS") operators use satellites to transmit video programming to subscribers, who must buy or rent a small parabolic "dish" antenna and pay a subscription fee to receive the programming service. There are four companies licensed by the Commission to provide DBS service: DirecTV, EchoStar (marketed as the DISH Network), Dominion Video Satellite, Inc. and R/L DBS Company.²⁵⁴ Of these, DirecTV, EchoStar and Dominion currently provide service. DirecTV and EchoStar offer up to 350 channels of video programming and serve more than ten million subscribers. Dominion offers religious oriented programming on a smaller number of channels than DirecTV or EchoStar. As discussed below, PrimeStar, which is now defunct, offered a medium powered satellite service that shared many of the attributes of DBS service, though PrimeStar service required a larger antenna and had lower channel capacity.²⁵⁵ DirecTV acquired PrimeStar in May 1999, and its subscribers are being transitioned to DirecTV's high-powered DBS service.²⁵⁶

70. **Subscribership.** DBS remains cable's largest competitor, and DBS subscribership shows continued growth. As of June 1999, DBS providers had over ten million subscribers, an increase of approximately 39% since 1998.²⁵⁷ Between June 1998 and June 1999, DirecTV added 1,524,000 subscribers and EchoStar added 1,234,000 subscribers.²⁵⁸ DirecTV is the nation's leading satellite television

²⁴⁹ The term "bundling," in this context, may be defined as "combining goods and/or services into a single package, often at a discounted price."

²⁵⁰ "Churn" occurs when a subscriber to a cable service drops the subscription to that service.

²⁵¹ Katz, *Model*, Aug. 1999, at 15.

²⁵² *Id.*

²⁵³ *Id.*

²⁵⁴ R/L DBS holds a permit to construct a DBS system but has not launched satellites or begun service. Current subscriber numbers from Skyreport, http://www.skyreport.com/skyreport/dth_us.htm.

²⁵⁵ In previous years, we included a discussion of PrimeStar Partners, L.P. ("PrimeStar"), a medium-powered Ku-band Fixed Satellite Service ("FSS"), together with our discussion of high-powered Ku-band DBS providers. *See 1998 Report 13 FCC Rcd at 24323 ¶ 61.*

²⁵⁶ This service is now called "Primestar by DirecTV." DirecTV has converted 20,000 PrimeStar customers to its high powered service and has an ongoing marketing plan to transition the remaining medium powered satellite service subscribers to DirecTV. *See* <http://www.primestar.com>.

²⁵⁷ SBCA Comments at 7.

²⁵⁸ <http://www.skyreport.com>.

service with more than 7.6 million customers as of June 1999, and a 72% share of the domestic DBS market.²⁵⁹ EchoStar had almost 2.6 million subscribers and 28% DBS market share as of June 1999.²⁶⁰ Analysts estimate that DBS will have nearly 21 million subscribers by 2007.²⁶¹ There is some overlap, however, between cable and DBS subscribership. Of the 60% of DBS subscribers with access to cable, 24% subscribe to cable in addition to DBS, primarily to receive local broadcast signals.²⁶²

71. **DBS versus Cable.** Differences between cable and DBS continue to diminish, and some observers assert that consumers perceive DBS and cable to be substitutable services.²⁶³ Both DBS and cable operators offer video programming packages to subscribers for a monthly fee, and offer premium and pay-per-view services. However, DBS subscribers continue to report higher levels of customer satisfaction over cable. For example, SBCA cites a DBS study that found “consumers who select DTH service find it superior to any other video service ... and for DBS subscribers, 90 percent rated the overall quality of their satellite system as excellent or good.”²⁶⁴ J.D. Power and Associates rated EchoStar’s DISH Network number one in customer satisfaction in the pay television industry in their 1999 Cable/Satellite TV Customer Satisfaction Study.²⁶⁵

72. According to surveys of DBS subscribers, the primary advantages of DBS are superior channel capacity (including the capacity for "Near Video On Demand" movies on pay-per-view), digital quality picture, CD-quality sound, and specialized programming such as exclusive sports packages.²⁶⁶ Some of these advantages, however, may diminish as cable operators offer digital services that allow them to match DBS operators in number of channels and signal quality.

73. Differences between cable and DBS prices have declined as the cost of DBS service and equipment has decreased. According to a study (the “Yankee Group 1999 DBS Study”) that compared cable and DBS programming prices, DBS’s average programming price was \$29.50 per month while its sample of large MSO programming prices averaged \$30.56 per month.²⁶⁷ These figures are consistent with the Commission’s last *Report on Cable Industry Prices*, which found that the average monthly rate charged by cable operators facing effective competition was \$28.71 as of July 1, 1998. For those cable operators not

²⁵⁹ This includes approximately two million PrimeStar by DirecTV subscribers.

²⁶⁰ Carmel Group, *Cable versus Satellite: Where’s the Beef?*, DBS Investor, Sept. 1999, at 4.

²⁶¹ *21 million by 2007?*, SkyREPORT, July 1999, at 11.

²⁶² SBCA Comments at Appendix B (“1999 DBS Study 6”).

²⁶³ AT&T Comments at 2. NCTA Comments at 16.

²⁶⁴ SBCA Comments at 12.

²⁶⁵ J.D. Power and Associates, *EchoStar DISH Network Rated Number One*, (press release) September 1999.

²⁶⁶ SBCA Comments at Appendix E.

²⁶⁷ Carmel Group, *Cable versus Satellite: Where’s the Beef?*, DBS Investor, Sept. 1999, at 12.

facing effective competition, the average monthly rate was \$30.53.²⁶⁸ DBS subscribers, however, generally pay additional "up-front costs" for equipment and installation. When examining "price and value differences" between DBS and cable services, the study also found that during the first year of subscribership, cable has "less than a \$400 overall payment required of a consumer, compared to a near \$600 investment by a satellite consumer."²⁶⁹ These figures include an average hardware cost of \$166 for satellite customers, an average installation cost of \$66 for satellite equipment, and an average installation cost of \$26.53 for cable service. However, discounts offered by DBS operators on equipment and installation can minimize the difference between cable and DBS prices.

74. **Availability of Local Broadcast Stations.** Consumers continue to report that the primary disadvantage of DBS is the lack of network television signals.²⁷⁰ On November 29, 1999, a revision of the Satellite Home Viewer Act ("SHVA") was enacted.²⁷¹ Under the Satellite Home Viewer Improvement Act of 1999 ("SHVIA"), satellite providers are allowed to retransmit network and network affiliate signals into local markets. The original SHVA legislation, passed in 1988, granted only a limited exception to the exclusive programming copyrights enjoyed by television networks and their affiliates. This exception recognized that some households are unable to receive network station signals over the air and allowed direct-to-home ("DTH") satellite video providers to retransmit network signals, but only "to persons who reside in unserved households" (also known as "white areas").²⁷² In 1998, several federal court decisions that resolved litigation between broadcasters and DBS program distributors over violations of SHVA resulted in the termination of network signals to approximately 1.5 million satellite customers.²⁷³ Subsequently, the House and the Senate passed separate bills authorizing DTH providers to retransmit network and network affiliate signals into local markets.²⁷⁴ Immediately after the law was signed, EchoStar

²⁶⁸ See *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment*, MM Docket No. 92-266, Report on Cable Industry Prices ("1998 Price Report"), 14 FCC Rcd 8331, 8333 ¶ 4 (1999).

²⁶⁹ Carmel Group, *Cable versus Satellite: Where's the Beef?*, DBS Investor, Sept. 1999, at 14.

²⁷⁰ SBCA Comments at 11.

²⁷¹ Pub. L. No. 106-113, § 1000(9), 113 Stat. 1501 (enacting S. 1948, including the Satellite Home Viewer Improvement Act of 1999 ("SHVIA"), Title I of the Intellectual Property and Communications Omnibus Reform Act of 1999 ("IPACORA"), relating to copyright licensing and carriage of broadcast signals by satellite carriers, codified in scattered sections of 17 and 47 U.S.C.).

²⁷² 17 U.S.C. § 119(d)(10). The term "unserved household" is defined by SHVA as a household that:

(A) cannot receive, through the use of a conventional outdoor rooftop receiving antenna, an over-the-air signal of grade B intensity (as defined by the Federal Communications Commission) of a primary network station affiliated with that network, and

(B) has not, within 90 days before the date on which that household subscribes, either initially or on renewal, to receive secondary transmissions by a satellite carrier of a network station affiliated with that network, subscribed to a cable system that provides the signal of a primary network station affiliated with that network.

²⁷³ See 1998 WL 310683 (S.D.Fla.), 1998 WL 544286 (M.D.N.C.) and 1998 WL 544297 (M.D.N.C.). See also *1998 Report*, 13 FCC Rcd at 24327-29 ¶¶ 68-70.

²⁷⁴ H.R. 1554 and S. 247.

began transmitting local network packages, selling for \$4.99 a month, to subscribers in 13 markets: Denver, New York, Los Angeles, Chicago, San Francisco, Boston, Washington, D.C., Dallas/Ft. Worth, Atlanta, Miami, Phoenix, Pittsburgh and Salt Lake City.²⁷⁵ The local channel package consists of the local affiliates of ABC, CBS, NBC, and FOX. DirecTV began immediate service to two markets: New York and Los Angeles.²⁷⁶ In addition to local network channels, DirecTV will include a national PBS in each local package, which sells for \$5.99 a month. During the six month period beginning on the date of the enactment of SHVIA, DBS providers may retransmit local signals without consent.²⁷⁷ Thereafter, DBS operators will be subject to retransmission consent rules similar to those established for cable operators.²⁷⁸ Prior to the passage of SHVIA, DirecTV and Fox Entertainment Group entered into a retransmission consent agreement to allow DirecTV to retransmit the signals of 22 major market FOX television stations.²⁷⁹ Subsequently, DirecTV has reached retransmission consent agreements with NBC for 13 major market stations, and ABC for its 10 network owned and operated stations.²⁸⁰ SHVIA further imposes several rulemaking and reporting requirements on the Commission.²⁸¹ We intend to implement these provisions expeditiously to ensure that consumers receive the intended benefits of the Act.

75. **Changes in Ownership.** Over the past year, changes in ownership and reassignments of orbital slots have altered the DBS landscape. On April 1, 1999, the Commission consented to the merger of United States Satellite Broadcasting Co., Inc. ("USSB") and DirecTV, and authorized the transfer of USSB's direct broadcast satellite licenses to DirecTV.²⁸² On April 28, 1999, Hughes, the parent company of

²⁷⁵ *DISH Network Launches Local Channels to 33 Percent of U.S. Households* (press release), November 24, 1999. See <http://www.dishnetwork.com>.

²⁷⁶ *DirecTV Applauds Signing of Satellite TV Bill Into Law by President Clinton* (press release), November 29, 1999. See <http://www.directv.com>.

²⁷⁷ See 47 U.S.C. § 325(b)(2).

²⁷⁸ See 47 U.S.C. § 325(b)(3)(C)(I) directing the Commission to establish election time periods for satellite carrier retransmission consent consistent with those established pursuant to the 1992 Cable Act. See also *Implementation of the Satellite Home Viewer Improvement Act of 1999*, CS Docket No. 99-363, Notice of Proposed Rulemaking, FCC 99-406 (rel. Dec. 22, 1999).

²⁷⁹ *Fox and DirecTV Reach Agreement for Retransmission of Fox-owned Stations* (press release) September 29, 1999. See <http://www.directv.com>.

²⁸⁰ *DirecTV Reaches Agreement with NBC for Retransmission of Network-Owned Stations* (press release), December 6, 1999. *ABC and DirecTV Reach Agreement for Retransmission of ABC Owned Television Stations* (press release), December 6, 1999. See also <http://www.directv.com>.

²⁸¹ See SHVIA at §§1008, 1009, 5003, 5008, 2002(a), and 2002(c).

²⁸² United States Satellite Broadcasting Co., Inc. Transferor and DirecTV Enterprises, Inc. Transferee; *For Consent to Transfer of Control of the United States Satellite Broadcasting Co., Inc. and DirecTV Enterprises, Inc. for Consent to Transfer Control of the USSB II Authorization to Operate a Direct Broadcast Satellite System Using Five Channels at the 101° W.L. Orbital Location; Authorization to Construct, Launch, and Operate a Direct Broadcast Satellite System Using Three Channels at 110° W.L. Orbital Location; and the Related Earth Registration*, (Call Sign E930437); Order and Authorization, 14 FCC Rcd 4585 (1999).

DirecTV, completed its acquisition of PrimeStar's medium powered satellite business.²⁸³ Subsequent to that grant, Tempo Satellite, Inc, a former DBS licensee that did not actually commence service, was also allowed to transfer its license to DirecTV.²⁸⁴ These changes give DirecTV increased channel capacity, facilitate "local-into-local" broadcast signal carriage and, for the first time, allow for DBS service to Hawaii, which has not previously been served by DBS.²⁸⁵

76. On May 19, 1999, the Commission granted the application of MCI Telecommunications Corporation and EchoStar for transfer of MCI's license to construct, launch and operate a DBS system at the 110° West Longitude location.²⁸⁶ On June 16, 1999, EchoStar was granted authority to temporarily relocate one of its satellites to a new orbital slot in order to improve DBS service to Alaska and to initiate service to Hawaii. On May 17, 1999, the Commission granted Dominion Video Satellite, Inc. authority to commence operation of a DBS service using an EchoStar satellite currently in orbit.²⁸⁷ This authorization permits Dominion to commence DBS service by leasing transponder capacity on an EchoStar satellite. Dominion is now offering service.²⁸⁸

77. **Competitive Barriers.** Commenters identify several barriers to the continuing success of DBS as an MVPD competitor. Commenters state that access to vertically integrated programming remains a "critical issue" for DBS.²⁸⁹ According to commenters, when vertically integrated cable operators migrate satellite delivered programming to a terrestrial delivery mode, they evade program access rules, thereby

²⁸³ *Tempo Satellite, Inc., Assignor and Directv Enterprises, Inc., Assignee, Application for Consent to Assign Authorization to Construct, Launch and Operate a Direct Broadcast Satellite System Using 11 Frequencies at the 119 degrees W.L. Orbital Location, Tci Satellite Entertainment, Inc., Transferor And Primestar, Inc., Transferee, Application for Transfer of Control of Tempo Satellite, Inc. Echostar Satellite Corporation And Directsat Corporation, Applications for Special Temporary Authority to Operate a Direct Broadcast Satellite System, Order and Authorization, 14 FCC Rcd. 7946 ("Primestar Order") (released May 28, 1999).*

²⁸⁴ *Primestar Order*, 14 FCC Rcd at 7951 ¶¶ 9-29.

²⁸⁵ DirecTV Comments at 9.

²⁸⁶ *Application of MCI Telecommunications Corporation, and EchoStar 110° Corporation for Consent to Assignment of Authorization to Construct, Launch, and Operate a Direct Broadcast Satellite System Using 28 Frequency Channels at the 110° W.L. Orbital Location*, File No. SAT-ASG-19981202-0093, Call Sign S2232, Order and Authorization, FCC 99-109 (released May 19, 1999).

²⁸⁷ *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.* File No. 12-SAT-ML-97, IBFS File No. SAT-MOD-19961108-00132; *Application for Additional Time to Construct and Launch Direct Broadcast Satellites*, File No. 13-SAT-MP/ML-97, IBFS File No. SAT-MOD-19961108-00133; *Application for Launch Authority*, File No. 108-SAT-LA-97, IBFS File No. SAT- L/A-19970814-00074, Order and Authorization, 14 FCC Rcd 8182 (1999).

²⁸⁸ Dominion was originally issued its DBS construction permit in 1982. It was expected that, within six years, Dominion would both build and launch its own satellite and commence service. Dominion was not, however, assigned its final DBS channels until 1995. *See Application of Dominion Video Satellite, Inc. for Assignment of Direct Broadcast Satellite Orbital Positions and Channels*, Memorandum Opinion and Order, 10 FCC Rcd 10480 (1995).

²⁸⁹ DirecTV Comments at 10.

preventing DBS operators from distributing valuable programming such as regional sports programming.²⁹⁰ Similarly, EchoStar asserts that large cable operators, because of their size and market share, have “overwhelming buying power in the programming market” that restricts access to independent programming as well as to vertically integrated programming.²⁹¹

78. According to SBCA, the inability to fully serve urban areas is another barrier to competition faced by DBS operators.²⁹² In addition, it maintains that DBS is a predominantly rural service and faces obstacles to competitive access to the suburban and urban markets.²⁹³ SBCA reports that approximately 40% of DBS subscribers do not have access to cable.²⁹⁴ DirecTV believes that for DBS to effectively serve urban markets, the Commission’s rules on the use of over-the-air-reception devices (“OTARD”) should be extended.²⁹⁵ OTARD applies to viewers who place video antennas on property that they own and that is within their exclusive use or control, including condominium owners and cooperative owners who have an area where they have exclusive use in which to install the antenna. The rule applies to townhomes and manufactured homes, as well as to single family homes. On November 20, 1998, the Commission amended the rule so that it will also apply to rental property where the renter has exclusive use, such as a balcony or patio.²⁹⁶ Commenters generally agree that the OTARD rules allow more viewers, particularly viewers in urban areas, access to DBS.²⁹⁷ However, other conditions may continue to limit DBS access for some viewers. For instance, DBS antennas must face south to receive an acceptable quality signal from the satellite, which transmits the video programming service. According to DirecTV, renters and property owners who do not have south facing exclusive use areas cannot opt for DBS service, and therefore must

²⁹⁰ DirecTV Comments at 10-11; SBCA Comments at 25; EchoStar Comments at 2-6.

²⁹¹ EchoStar Comments at 6.

²⁹² SBCA Comments at 10.

²⁹³ *Id.* at 10-11.

²⁹⁴ *Id.* at Appendix B (“1999 DBS Study 6”).

²⁹⁵ 47 C.F.R. § 1.4000. As directed by Congress in Section 207 of the Telecommunications Act of 1996, the Commission adopted the OTARD Rule concerning governmental and nongovernmental restrictions on viewers’ ability to receive video programming signals from DBS, MMDS, and television broadcast stations. The rule prohibits restrictions that impair the installation, maintenance or use of antennas used to receive video programming. The rule prohibits most restrictions that: (1) unreasonably delay or prevent installation, maintenance or use; (2) unreasonably increase the cost of installation, maintenance or use; or (3) preclude reception of an acceptable quality signal.

²⁹⁶ *Restrictions on Over-the-Air Receptions Devices: Television Broadcast, Multichannel Multipoint Distribution and Direct Broadcast Satellite Services*, CS Docket No. 96-83, Second Report and Order, 13 FCC Rcd 23874 (1998); *Restrictions on Over-the-Air Receptions Devices: Television Broadcast, Multichannel Multipoint Distribution and Direct Broadcast Satellite Services*, CS Docket No. 96-83, Order on Reconsideration, FCC 99-360 (rel. Nov. 24, 1999).

²⁹⁷ DirecTV Comments at 10-11, NRTC Comments at 17-18, SBCA Comments at 24-25.

rely on cable operators, who have previously obtained exclusive, long term, MDU contracts, as their MVPD provider.²⁹⁸

79. Signal interference is also cited as a potential barrier to competition. Commenters assert that new services that propose to operate on a shared basis in the frequency band allocated to DBS service would cause “unacceptable interference.”²⁹⁹ Finally, because DBS service relies on a telephone return path and can provide only limited interactivity, commenters assert that DBS is at a competitive disadvantage to cable with its broadband conduit to and from the home.³⁰⁰

80. On the other hand, some competitive barriers appear to be diminishing, as DBS equipment costs fall and broadcast signals become available in many markets. Indeed, some assert that the advertising for DBS services indicates that DBS is now targeting a broader range of consumers.³⁰¹

81. **Data and Interactive Services.** As with cable operators, satellite providers are developing ways to bring advanced services to their customers. Hughes Network Systems, who owns DirecTV, offers a satellite-delivered high-speed Internet access service (“DirecPC”), with a telephone return path.³⁰² DirecDUO, a dual functioning DBS antenna, enables consumers to receive both video programming and DirecPC services.³⁰³ America Online and DirecTV have partnered to develop a set-top box that will provide interactive and “web surfing” Internet services. DirecTV has also formed partnerships with the TiVo Company to develop a VCR-like set-top box with personalized TV functions and with Wink Communications to provide interactive multimedia services.³⁰⁴ DirecTV recently created two High

²⁹⁸ DirecTV Comments at 7. See also *SBC Signs Strategic Marketing Agreement With DirecTV to Offer Television Entertainment Programming to Its 18 Million Residential Customers* (press release), July 16, 1999 (announcing that DirecTV and a local exchange carrier, SBC Communications, have extended their marketing alliance to add DirecTV to the package of communications services that SBC markets to owners of MDUs and single family homes).

²⁹⁹ Broadwave USA, Diversified Communications, and the Northpoint Company have proposed to operate terrestrial point-to-multipoint microwave service in the DBS uplink band. Skybridge and Virtual Geosatellite, propose using the DBS downlink band for new fixed satellite services. See DirecTV Comments at 4 SBCA Comments at 23. See also *Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS systems Co-Frequency with GSO and Terrestrial Systems in the Ku-Band Frequency Range, and Amendment of The Commission's Rules to Authorize Subsidiary Terrestrial Use of the 12.2-12.7 Ghz Band By Direct Broadcast Satellite Licensees And Their Affiliates*, ET Docket No. 98-206, Notice of Proposed Rulemaking, 14 FCC Rcd 1131, (1998).

³⁰⁰ EchoStar Comments at 7-9. DBS was conceived as a one-way service (transmissions from a space station for direct reception by an individual or a community) modeled on terrestrial television broadcasting. See 47 C.F.R. § 100.3.

³⁰¹ See Comcast *ex parte* letter, December 21, 1999 (attaching a full-page DirecTV advertisement from USA Today featuring Drew Carey, star of a television program about an “average guy”).

³⁰² DirecPC uses a slightly larger dish antenna to view a FSS satellite in addition to the DBS satellite. See Hughes Network Systems, <http://www.direcpc.com>.

³⁰³ *DirecPC: Out of the Closet*, SkyREPORT, July 1997, at 4.

³⁰⁴ Carmel Group, *Interactivity by Satellite and Cable: The Future of TV?*, DBS Investor, Sept. 1999, at 16.

Definition Television (HDTV) offerings – a nationally available HBO HDTV channel and a pay-per-view HDTV channel featuring movies and special events.³⁰⁵ EchoStar has partnered with Microsoft backed WebTV to provide Internet access through television sets. EchoStar and OpenTV, Inc. -- a company that produces interactive television technology -- will jointly offer e-mail, e-commerce and on-line banking services to its subscribers early next year.³⁰⁶ Nevertheless, EchoStar contends that the Commission should “demand from merger applicants” a commitment to provide access to their broadband networks to MVPDs, including DBS, on reasonable terms to be negotiated by the parties or prescribed by the Commission upon a failure to agree.³⁰⁷ Finally, both Motorola and Thompson have announced that they each will produce equipment, including DBS systems with Internet access capability.³⁰⁸

82. ***DBS Public Interest Obligation.*** On November 19, 1998, the Commission adopted rules implementing Section 25 of the 1992 Cable Act, which imposed certain public interest obligations on DBS providers.³⁰⁹ The statute requires DBS service providers to set aside a percentage of channel capacity for non-commercial programming of an educational or informational nature. DirecTV began providing application packets to potential non-commercial and educational programmers in June 1999.³¹⁰ The Commission anticipates that a variety of new programming could soon become available on DBS systems, including children’s programming, distance learning programs, university research projects shared nationwide, and health applications developed for rural America.³¹¹ DBS licensees must also comply with the political broadcasting rules of Section 312(a)(7) of the Communications Act which grants candidates for federal office reasonable access to broadcasting stations, and Section 315 of the Act, which requires that licensees provide equal opportunities for those candidates to use broadcast stations at the lowest unit charge.

83. The effective date for implementation of the DBS public interest obligations was December 15, 1999.³¹² DirecTV began offering such programming on that date. On December 10, 1999, Echostar

³⁰⁵ DirecTV Comments at 18. *See also DirecTV Launches Second HDTV Channel Beginning Nov. 1* (press release), Oct. 28, 1999.

³⁰⁶ Monica Hogan, *EchoStar Plots Interactive Future After OpenTV Deal*, Multichannel News, Oct. 19, 1998, at 49 and 52.

³⁰⁷ EchoStar Comments at 8-9.

³⁰⁸ DirecTV, Inc., *DirecTV and Thomson Multimedia To Form Strategic Partnership In Digital Television and Services* (press release), Aug. 4, 1998. For the Motorola announcement, *see* Dean Takahashi, *Motorola to Unveil Set-Top Box That Offers Many Digital Tools*, The Wall Street Journal, Sept. 14, 1998, at B8.

³⁰⁹ *Implementation of Section 25 of the Cable Television Consumer Protection and Competition Act of 1992, Direct Broadcast Satellite Public Interest Obligations*, MM Docket No. 93-25, Report and Order, (“*DBS Public Interest Order*”), 13 FCC Rcd 23254 (1998).

³¹⁰ DirecTV Comments at 16.

³¹¹ *See DBS Public Interest Order*, 13 FCC Rcd at 23256 ¶ 3. *See also Statement of Chairman William E. Kennard*, 13 FCC Rcd at 23312-3.

³¹² *DBS Public Interest Order*, 13 FCC Rcd at 23309-10 ¶ 136; *see also* 47 C.F.R. § 100.5(c)(7).

filed a motion for a six-week extension to come into compliance. That motion was denied and EchoStar was ordered to come into compliance by January 7, 2000, or face fines.³¹³

C. Home Satellite Dishes

84. In contrast to the growth of DBS subscribers, the HSD industry, also known as C-Band, is experiencing a steady decline of customers. Between June 1998 and June 1999, HSD subscribership fell 12%, from 2,028,225 to 1,783,411, as many customers move to DBS service with its smaller antennas.³¹⁴ For instance, EchoStar announced a marketing agreement with TV Guide C-band unit Superstar/Netlink Group to convert its 1.4 million current and inactive large dish HSD subscribers to EchoStar's DBS service which uses 18 inch "dish" antennas.³¹⁵ Despite the steady decline, SBCA expects "C-Band service to continue as a viable business for the foreseeable future [as a] niche distribution medium" serving rural subscribers unserved by cable.³¹⁶ SBCA also notes that many existing HSD transponder leases extend into the middle of the next decade.³¹⁷

D. Multichannel Multipoint Distribution Service

85. MMDS systems, often referred to as "wireless cable," transmit video programming and other services to subscribers through 2 GHz microwave frequencies, using Multipoint Distribution Service ("MDS") and leased excess channel capacity on Instructional Television Fixed Service ("ITFS") channels.³¹⁸ An MMDS system must have a line-of-sight ("LOS") path between the transmitter or signal booster and the receiving antenna. When using analog signals, because of capacity limitations for the frequencies, MMDS operators have a maximum of 33 microwave channels available in each market, including 13 MDS channels and 20 ITFS channels. Digital technology significantly increases this channel capacity, improves picture and audio quality, and makes two-way services, such as high-speed Internet access and telephony, possible.

86. The MMDS industry currently provides competition to the cable industry only in limited areas. For example, BellSouth provides competitive digital MMDS video services in areas in the southeast and GTE provides competitive digital MMDS services in Honolulu. Sprint Corporation and MCI WorldCom, Inc. have acquired most of the larger MMDS operators over the past year, with the intent of using the acquired frequencies to provide two-way communication services. Since the 33-channel analog capacity of MMDS systems is generally not competitive with that of most cable systems, MMDS

³¹³ See *Petition for Waiver of Direct Broadcast Satellite Public Interest Obligation Implementation Date, EchoStar Satellite Corporation*, File No. SAT-WAV-19991210-00116, Memorandum Opinion and Order, FCC 99-394 (rel. Dec. 17, 1999).

³¹⁴ Banc of America Securities, *Payload Monthly*, September 1999.

³¹⁵ CableFAX Daily, November 3, 1999, at 1.

³¹⁶ SBCA Comments at 4.

³¹⁷ *Id* at 5.

³¹⁸ *Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act - Competitive Bidding*, MM Docket No. 94-131 and PP Docket No. 93-253, Report and Order, 10 FCC Rcd at 9589, 9593 ¶ 7 (1995); 1996 Report, 12 FCC Rcd at 4386 ¶ 51 n.152.

subscribership has declined. One analyst believes that analog MMDS video will eventually serve only rural areas, but that digital video subscribership will climb moderately and high-speed data access through MMDS will grow rapidly.³¹⁹

87. **MMDS Households and Subscribership.** In 1999, the number of homes with a serviceable line of sight to an MMDS operator's transmission facilities was 62,500,000, and the number of homes actually capable of receiving an MMDS operator's signal ("homes seen") was 35,750,000.³²⁰ The total number of MMDS video subscribers fell from 1.0 million to 821,000 between June 1998 and June 1999, a decrease of 17.9%. Of the 821,000 subscribers in 1999, 721,000 were analog MMDS subscribers and the other 100,000 were subscribers to digital MMDS services.³²¹

88. **Video Joint Ventures.** Two MMDS operators, Nucentrix Spectrum Resources, Inc. ("Nucentrix"), formerly Heartland Wireless Communications, Inc., and Wireless One, Inc., have announced joint ventures with DBS operator DirecTV. According to these agreements, the MMDS operator will combine its MMDS frequencies with DirecTV's satellite video programming so that consumers can receive local broadcast and other channels with MMDS frequencies in addition to DirecTV's full video service through a DBS dish. The local MMDS operator handles installation of and subscription to both services. This service is offered to both single-family homes and MDUs.³²² Many MMDS operators view MDUs as underserved by cable operators and as a possible source for rapid revenue growth.³²³ Nucentrix reports that it has begun offering its joint MMDS-DirecTV service in 41 markets.³²⁴

89. **Interexchange Carrier ("IXC") Investment.** Over the past year, MCI WorldCom and Sprint have purchased a significant number of MMDS operators.³²⁵ Sprint has acquired WBS America, LLC, People's Choice TV Corporation, American Telecasting, Inc., Videotron Hollard B.V., Wireless Cable of Florida, and Transworld Telecommunications, Inc. These properties give Sprint the potential of offering

³¹⁹ Paul Kagan Assocs., *Wireless/Private Cable Investor*, July 13, 1999, at 1-2.

³²⁰ Paul Kagan Assocs., Inc., *Wireless Cable Sub Count and Revenue Projections, 1998-2009*, *Wireless/Private Cable Investor*, July 13, 1999, at 4-5. The number of homes with a "serviceable line of sight" counts all homes which an MMDS operator is licensed to serve within a particular license area, regardless of technical limitations such as signal strength or blockage by terrain. The number of "homes seen," on the other hand, is the number of homes that MMDS operators have the technical ability to serve. For more discussion, see *1997 Report*, 13 FCC Rcd at 1081 ¶ 74, fn. 272.

³²¹ Paul Kagan Assocs., Inc., *Wireless Cable Sub Count and Revenue Projections, 1998-2009*, *Wireless/Private Cable Investor*, July 13, 1999, at 4-5.

³²² See PRNewswire, *Wireless One, Inc. Receives New Financing Commitment; \$36 Million Agreement Would Provide Funds Needed To Exit Bankruptcy*, May 18, 1999 and <http://www.heartland-wireless.com/investors/strategic.html>. See also *Heartland Wireless and Wireless One Dropping Video Focus*, *Comm. Daily*, Mar. 22, 1999, at 1.

³²³ Karen Brown, *Wireless Operators Zero In On MDU Marketplace*, *Cable World*, Sept. 6, 1999, at 32.

³²⁴ <http://www.heartland-wireless.com/investors/strategic.html>.

³²⁵ In addition, MCI WorldCom and Sprint have agreed to merge, but the merger is still under regulatory review. MCI WorldCom, Inc., *MCI WorldCom and Sprint Create Pre-Eminent Global Communications Company For 21st Century* (press release), Oct. 5, 1999.

two-way communication services to almost 30 million households nationwide.³²⁶ MCI WorldCom has purchased CAI Wireless,³²⁷ which is also majority owner of CS Wireless. MCI WorldCom has agreed to acquire Wireless One,³²⁸ and Southern Wireless Video, Inc.³²⁹ With these acquisitions, MCI WorldCom has the ability to offer communication services to over 50 million homes.³³⁰ Sprint and MCI WorldCom intend to use this spectrum as a “last mile” connection to homes for the provision of high-speed Internet access. It remains unclear whether they will continue to provide analog video service, upgrade to digital video service, or discontinue multichannel video service.³³¹

90. **Internet and High-Speed Data Services.** Last year, the Commission adopted new rules that provide flexibility to MMDS and ITFS licensees to employ digital technology in delivering two-way communications services, including high-speed Internet access, video conferencing, and distance learning.³³² Currently, a few MMDS operators offer Internet service. One such system in Phoenix, operating under developmental authority, has over 10,000 customers for its Internet service and is competing with the local cable operator and U S West’s advanced telecommunications offering.³³³

91. **Barriers to Competition.** WCA has several proposed recommendations for Commission action to remove barriers to competition for MMDS operators.³³⁴ First, WCA requests that the Commission recommend that Congress amend the program access law to cover all cable networks, regardless of ownership or method of delivery. WCA notes that the migration of programming networks from satellite to terrestrial delivery is accelerating, thereby limiting MMDS access to programming under the Commission’s

³²⁶ Sprint Communications Company, LP, *Sprint Agrees To Acquire Operating Units of WBS America, LLC* (press release), July 27, 1999.

³²⁷ MCI WorldCom, Inc., *MCI Worldcom Completes CAI Wireless Acquisition* (press release), Sept. 1, 1999.

³²⁸ PRNewswire, *Wireless One to Become Wholly-Owned Subsidiary of MCI WorldCom*, July 20, 1999.

³²⁹ *Comm. Daily Notebook*, *Comm. Daily*, July 21, 1999. Southern Wireless Video, Inc., was formerly known as PrimeOne Tele-TV, which purchased and currently operates the digital MMDS system in Southern California that was launched by Pacific Bell. See *1998 Report*, 13 FCC Rcd at 24354 ¶ 112.

³³⁰ Elizabeth Douglass, *MCI-Sprint Merger Could Speed Race for High-Speed Access*, Oct. 17, 1999, <http://www.techserver.com/noframes/story/0,2294,500046516-500076035-500169460-0,00.html>.

³³¹ Jim Barthold, *Wireless Stepchildren Becoming Empowered*, *CableWorld*, Aug. 16, 1999, at 38, 41. Kevin Brauer, Sprint’s President, National Integrated Services, indicated that digital video may be part of Sprint’s plans. Brauer specifically mentioned People’s Choice TV’s digital MMDS and high-speed Internet access services in Phoenix as a possible model. The Phoenix system also competes with Cox cable and U S West’s VDSL system. Alan Breznick, *In Phoenix, Everyone Wants a Piece of the Action*, *CableWorld*, July 19, 1999, at 16.

³³² See *Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, Report and Order, Docket No. 97-217, 13 FCC Rcd 19112 (1998); Amendment of Parts 21 and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmissions, MM Docket No. 97-217, Order on Reconsideration, 14 FCC Rcd 12764 (1999).*

³³³ See also *1998 Report*, 13 FCC Rcd at 24338 ¶ 85, fn. 370.

³³⁴ See ¶ 132 *infra* (summarizing BellSouth’s comments regarding barriers to competition).

program access rules.³³⁵ WCA also contends that the consolidation and clustering of cable systems gives cable MSOs leverage vis-à-vis local broadcast network affiliates, allowing cable operators to negotiate retransmission consent agreements that discriminate against competing MVPDs. WCA further reports that broadcast networks have signed exclusive distribution agreements with cable operators for their cable networks as part of retransmission consent agreements. Accordingly, WCA asks that the Commission recommend that Congress enact legislation that contains non-discrimination provisions for retransmission consent agreements.³³⁶ WCA also recommends that the Commission continue to act quickly on antenna preemption and other access to premises issues, and that the Commission request clarification of its jurisdiction in those areas where there may be doubts as to the scope of the Commission's authority, especially in regard to MDUs.³³⁷ WCA further asks the Commission to seek clarification from Congress concerning the Commission's jurisdiction over "home run" wiring and its authority to adopt rules concerning the disposition of such wiring. WCA generally agrees with current rules concerning wiring, but states that the rules should not allow a departing cable operator to remove its wiring when it could instead sell the wiring at depreciated value to alternative MVPDs. According to WCA, MDU owners may deny access to competing MVPDs out of concern that cable companies may elect to remove their wiring, thus requiring a potentially damaging and disruptive new installation by an alternative MVPD.³³⁸

E. Satellite Master Antenna Television Systems

92. SMATV systems are satellite systems used to distribute television signals to households located in one or more adjacent buildings, primarily serving urban and suburban MDUs.³³⁹ SMATV systems do not use public rights-of-way, and thus fall outside of the Communications Act's definition of a cable system.³⁴⁰ In general, SMATV operators are subject to less regulatory oversight than traditional cable systems.³⁴¹ Some SMATV systems use microwave transmissions and wires to serve multiple buildings that

³³⁵ WCA Comments at 5-11.

³³⁶ *Id.* at 11-14. WCA specifically cites MSNBC, owned by NBC, and FX, owned by Fox.

³³⁷ *Id.* at 14-17.

³³⁸ *Id.* at 17-20.

³³⁹ SMATV providers receive and process satellite signals directly at an MDU or other private property with an on-site headend facility consisting of receivers, processors and modulators, and distribute the programming to individual units through an internal hard-wire system in the building. Regulatory changes in 1991 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. Operators using this technology are known as enhanced SMATV operators, and because of efficiency savings, they are more competitive with cable operators than standard SMATV operators. *1997 Report*, 13 FCC Rcd at 1085 ¶¶ 82-83; *1998 Report*, 13 FCC Rcd at 24339-40 ¶ 88.

³⁴⁰ 1996 Act, sec. 301(a)(2), 47 U.S.C. § 522(7).

³⁴¹ 1996 Act, sec. 301(a)(2), 47 U.S.C. § 522(7). For example, private cable and SMATV operators: (a) are not required to obtain cable television franchises; (b) do not face regulatory constraints on the geographic areas in which they may offer video services; (c) do not pay franchise and Federal Communications Commission subscriber fees; (d) are not obligated to pass every resident in a given area; (e) are not subject to rate regulation; and (f) are not subject to must carry and local government access obligations. *1997 Report*, 13 FCC Rcd at 1085 ¶ 82, fn. 296.

are not commonly owned.³⁴² Under the 1996 Act, SMATV operators may use wires to connect separately owned buildings, as long as the wires do not traverse public rights-of-way.³⁴³

93. On July 13, 1999, the Commission adopted a *Notice of Proposed Rulemaking* seeking comment on a proposal to allow SMATV operators to use Cable Television Relay Service (“CARS”) 12 GHz band channels to deliver video programming.³⁴⁴ The proceeding was initiated in response to a petition filed by OpTel, a SMATV operator, on April 1, 1998. While OpTel sought such authorizations only for SMATV systems, the Commission broadened the proceeding to potentially include all MVPDs as potential CARS licensees.³⁴⁵ The Commission also sought comment on whether the CARS band should be expanded to include the frequency band segment from 13.20-13.25 GHz, currently designated for television broadcast auxiliary service.³⁴⁶

94. **SMATV Operators.** SMATV operators, also known as private cable operators, consist of hundreds of private and public, small and medium size firms throughout the nation.³⁴⁷ Among the largest SMATV operators as of June 1999, were OpTel, Cable Plus, MidAtlantic Communications, and OnePoint Communications Corp.³⁴⁸ These relatively large SMATV operators serve between 45,000 and 216,249 subscribers each.³⁴⁹ Many SMATV operators serve approximately 3,000-4,000 customers.³⁵⁰

95. **Growth.** As of December 1997, there were approximately 24.9 million year-round occupied “households” (individual dwelling units) located in MDU housing in the United States, comprising approximately 25% of the estimated 99.5 million total year-round occupied housing units nationwide.³⁵¹ Because SMATV systems generally serve MDUs, and since a portion of MDUs are currently

³⁴² 1997 Report, 13 FCC Rcd at 1085 ¶ 82. The Commission held in 1991 that microwave transmissions do not “use” public rights-of-way. *Amendment of Part 94 of the Commission’s Rules to Permit Private Video Distribution Systems of Video Entertainment Access to the 18 GHz Band*, PR Docket No. 90-5, Report and Order, 6 FCC Rcd. 1270, 1271 ¶10 (1991).

³⁴³ 1996 Act sec. 301(a)(2), 47 U.S.C. § 522(7). Prior to the 1996 Act, to qualify for this exception the buildings had to be under common ownership, control, or management. *1997 Report*, 13 FCC Rcd at 1085 ¶ 82, fn 297.

³⁴⁴ *Petition for Rulemaking To Amend Eligibility Requirements in Part 78 Regarding 12 GHz Cable Television Relay Service*, CS Docket No. 99-250, Notice of Proposed Rulemaking, FCC 99-166 (rel. July 14, 1999).

³⁴⁵ *Id.* at ¶ 4.

³⁴⁶ *Id.* at ¶ 8.

³⁴⁷ *1997 Report*, 13 FCC Rcd at 1085 ¶ 84; *1998 Report*, 13 FCC Rcd at 24341 ¶ 90.

³⁴⁸ *Who’s Who in Private Cable*, Private Cable & Wireless Cable, Dec. 1998, at 18; facsimile from Independent Cable Television Association (“ICTA”), Oct. 13, 1999, at 2. On October 28, 1999, OpTel, Inc., voluntarily sought protection under Chapter 11 of the U.S. Bankruptcy Code.

³⁴⁹ *Who’s Who in Private Cable*, Private Cable & Wireless Cable, Dec. 1998, at 18; facsimile from ICTA, Oct. 13, 1999, at 2.

³⁵⁰ Facsimile from ICTA, Oct. 13, 1999, at 2.

³⁵¹ U.S. Census Bureau, *American Housing Survey for the United States in 1997*, Table 1A-1: “Introductory Characteristics—All Housing Units,” Oct. 1999.

governed by “perpetual” or long-term exclusive contracts with franchised cable operators, SMATV operators’ potential residential subscriber base is likely somewhat less than 25% of all households nationwide.³⁵² Last year, we reported that there were 940,000 residential SMATV subscribers, as of June 1998.³⁵³ This year, the same source estimates that there were approximately 1.5 million SMATV subscribers as of June 1999.³⁵⁴

96. ***Advanced and Other Service Offerings.*** Over the past several years, private cable operators offering service over SMATV systems have begun to offer many of the same services offered by franchised cable operators, including local and long distance residential telephone service and Internet access.³⁵⁵ In previous years, we reported that SMATV providers offer other unique services such as closed-circuit security monitoring, voice mail, paging, and touch-screen monitor kiosk customer service.³⁵⁶ Video services generate the most revenue for SMATV operators, followed by Internet access service, pay-per-view service, security services, and telephony.³⁵⁷ OpTel, the nation’s largest SMATV provider, offers bundled voice, video and data services to MDU residents in 13 markets.³⁵⁸ OnePoint Communications Corp., a leading SMATV operator and licensed competitive local exchange carrier (“CLEC”), offers telephony and Internet access.³⁵⁹

97. SMATV operators continue to upgrade their systems in order to increase channel capacity and service offerings.³⁶⁰ According to one source, average channel capacity among those responding to a recent poll was approximately 89 channels, with a low of 50 channels and a high of 200 channels offered.³⁶¹

98. ***SMATV/DBS Combination Services.*** As we reported last year, SMATV operators have joined with satellite providers to offer flexible, low-cost programming options to MDU consumers.³⁶² In particular, SMATV operators combine analog antenna and DBS systems in order to offer MDU residents

³⁵² Facsimile from ICTA, Oct. 13, 1999, at 2. “Perpetual” contracts generally provide that they run for the term of a franchise “and any extensions thereof.”

³⁵³ *1998 Report*, 13 FCC Rcd at 24341 ¶ 90.

³⁵⁴ NCTA Comments at 5. Last year, NCTA estimated that there were 940,000 residential SMATV subscribers as of June 1998. See App. C, Tbl. C-1. See also, *1998 Report*, 13 FCC at 24341 ¶ 90. The increase in the number of estimated SMATV subscribers over last year may be attributable to the inexact method used for estimating SMATV subscribers.

³⁵⁵ OpTel Comments at 3; *1997 Report*, 13 FCC Rcd at 1085 ¶ 84; *1998 Report*, 13 FCC Rcd at 24342 ¶ 92.

³⁵⁶ *1998 Report*, 13 FCC Rcd at 24342 ¶ 92.

³⁵⁷ *Private Cable Industry Facts*, Private Cable & Wireless Cable, Dec. 1998, at 4.

³⁵⁸ *Who’s Who in Private Cable*, Private Cable & Wireless Cable, Dec. 1998, at 18.

³⁵⁹ *Id.*

³⁶⁰ *1998 Report*, 13 FCC Rcd at 24342 ¶ 91.

³⁶¹ Facsimile from ICTA, Oct. 13, 1999, at 2. Nineteen SMATV operators responded to ICTA’s request for SMATV system information.

³⁶² *1998 Report*, 13 FCC Rcd at 24342-3 ¶ 93.

analog and digital programming without the need for an individual satellite dish.³⁶³ Such systems can offer residents traditional SMATV service alone, or a “bulk service” that combines traditional SMATV with select DBS feeds.³⁶⁴ The bulk offerings can provide local programming and non-broadcast networks at a low-cost.³⁶⁵ Residents can also choose DBS on an a la carte basis and can thereby receive more channels than are available from bulk service.³⁶⁶ As a partner with DBS companies, SMATV operators can receive commissions on DBS subscriptions sold or on activation bonuses.³⁶⁷ The relationship can be beneficial to both the SMATV and DBS industries, and is similar to the relationship DBS is building with MMDS systems.³⁶⁸

99. **Uniform Rates and Inside Wiring.** SMATV operator OpTel remains concerned about several issues that relate to its efforts to compete in the MDU market. Of particular concern is a decision by the Commission to allow franchised cable operators to offer “bulk” discounts to residents of MDUs on an individual basis.³⁶⁹ OpTel also raises concerns over the use of existing wiring in an MDU.³⁷⁰ The Commission continues its review of comments submitted in the *Second Further Notice of Proposed Rulemaking* on the matter of inside wiring.³⁷¹

100. **Real Estate Owners and Property Managers.** The relationship between SMATV providers and real estate investment trusts (“REITS”),³⁷² national property management companies and ownership groups, has changed. Exclusive rights to a property in exchange for a revenue share, as described in last year’s report, is, according to one report, becoming increasingly rare.³⁷³ Property managers are increasingly aware of MVPD technology issues, and are investing in infrastructure in order to gain flexibility of choice over video providers.³⁷⁴ SMATV operators, on the other hand, are focusing on SMATV/DBS combination

³⁶³ Cathy Stephens, *Connect Television’s C-Band/DBS Solution*, Private Cable & Wireless Cable, Oct. 1999, at 14 (“Stephens, Oct. 1999”).

³⁶⁴ OpTel Comments at 3; Stephens, Oct. 1999.

³⁶⁵ Stephens, Oct. 1999; see also <http://www2.multihousing.com/infocenter/privatecable/index.html>.

³⁶⁶ Stephens, Oct. 1999.

³⁶⁷ Paul Kagan Assocs., Inc., *ICTA Show: Echostar Gets Serious on MDU Alliances*, Wirelsss-Private Cable Investor, Aug 6, 1999, at 9; *DBS Distribution System for MDUs Reduces Costs*, Private Cable & Wireless Cable, Sept. 1999, at 40.

³⁶⁸ See ¶ 88 *supra*.

³⁶⁹ OpTel Comments at 4-5; *Implementation of Cable Act Reform Provisions of the Telecommunication Act of 1996*, CS Docket No. 96-85, Report and Order, 14 FCC Rcd 5296 (1999); see ¶ 158 *infra*.

³⁷⁰ See ¶¶ 154-156 *infra*.

³⁷¹ See ¶ 155 *infra*.

³⁷² A real estate investment trust (“REIT”) is essentially a corporation or business trust that combines the capital of many investors to acquire or provide financing for all forms of real estate. *1997 Report*, 13 FCC Rcd at 1085 ¶ 89.

³⁷³ *1998 Report*, 13 FCC Rcd at 24343 ¶ 94; James Gomez, *Business Trends Among MDUs: Looking for Creative Solutions*, Private Cable & Wireless Cable, July 1999, at 24 (“Gomez, July 1999”).

³⁷⁴ Gomez, July 1999; see also <http://www2.multihousing.com/consulting/techno.html>.

services and advanced services, such as telephony and Internet access, to attract property managers.³⁷⁵ Many SMATV operators are becoming CLEC licensees, while also aligning with third-party providers of high-speed Internet access.³⁷⁶ One analyst notes that most SMATV operators are at least testing the bundling of video, Internet, and telephone service.³⁷⁷

F. Broadcast Television Service

101. Broadcast networks and stations are competitors to MVPDs particularly in the advertising and program acquisition markets. Broadcast networks also compete with MVPDs by supplying video programming over the air, particularly to those who do not subscribe to an MVPD service. Additionally, broadcast networks and stations are suppliers of content for distribution directly to consumers and to consumers through MVPDs.³⁷⁸ Since the *1998 Report*, the broadcast industry has seen continued growth in the number of operating stations and advertising revenues. The number of commercial and noncommercial television stations increased to 1599 as of July 31, 1999, from 1583 as of August 31, 1998.³⁷⁹ Broadcast total advertising revenues reached \$34.6 billion in 1998, a 6.7% increase over 1997.³⁸⁰ Advertising revenues for the seven broadcast networks alone reached \$16.3 billion in 1998.³⁸¹ In comparison, cable programming networks earned \$6.9 billion in advertising revenue in 1998, an increase of 18.6% over 1997.³⁸²

102. During the 1998-99 television season, ABC, CBS, Fox, and NBC accounted for a combined 52% share of prime time viewing among all television households, compared to 55% in the previous year. UPN and WB achieved a combined 8% share of prime time viewing, down from 9% last year.³⁸³ The most recent data available for households subscribing to cable service indicate that programming originating on

³⁷⁵ Paul Kagan Assocs., Inc., *ICTA Show: Echostar Gets Serious on MDU Alliances*, Wirelsss-Private Cable Investor, Aug. 6, 1999, at 10.

³⁷⁶ Gomez, July 1999.

³⁷⁷ Paul Kagan Assocs., Inc., *ICTA Show: Echostar Gets Serious on MDU Alliances*, Wirelsss-Private Cable Investor, Aug. 6, 1999, at 10; *See also* <http://www2.multihousing.com/infocenter/privatecable/index.html>.

³⁷⁸ *See 1995 Report*, 11 FCC Rcd at 2113-15 ¶¶ 112-115.

³⁷⁹ *Compare* Federal Communications Commission, *Broadcast Station Totals as of July 31, 1999*, FCC News Release (Aug. 12, 1999) *with* Federal Communications Commission, *Broadcast Station Totals as of August 31, 1998*, FCC News Release (Sept. 11, 1997).

³⁸⁰ Television Bureau of Advertising, *TVB Releases 1998 TV Ad Figures* (news release), Mar. 10, 1999. The percentage growth over 1997 may be slightly overstated because the PaxTV network was added in the third quarter of 1998, but was not yet in existence in 1997.

³⁸¹ *Id.* This figure represents sales for ABC, CBS, Fox, NBC, UPN, and WB; the PaxTV network was added in the third quarter of 1998.

³⁸² NCTA, *Cable Advertising Revenue: 1983-1998 (In Millions)*, Cable Television Developments, Summer 1999, at 9 (*citing* Paul Kagan Assocs., Inc., *Cable TV Advertising*, May 21, 1999, at 2).

³⁸³ *People's Choice: Broadcast Network Prime-Time Ratings According to Nielsen Media Research, Sept. 13-19*, Broadcasting & Cable, Sept. 27, 1999, at 74. Figures were not available for PaxTV.

local broadcast television stations accounted for a combined 56% share of 24-hour viewing in the 1997-98 television season. Non-premium cable networks and pay cable services achieved a combined 57% share of 24-hour viewing, up from 54% the previous season. (Reported audience shares exceed 100% due to multiple set viewing.)³⁸⁴

103. The Commission has undertaken several rulemakings regarding its broadcast ownership and attribution rules. On August 5, 1999, the Commission revised its local market television ownership rules (the "TV duopoly" rule) and the radio-television cross-ownership (or "one-to-a-market") rule to reflect changes in the media marketplace. The revised rules recognize the growth in the number and variety of media outlets in local markets, including cable and direct broadcast satellite, and reflect the Commission's desire to permit broadcasters to realize the efficiencies of common ownership, consistent with diversity and competition in broadcast markets. The changes are intended to improve the ability of over-the-air broadcast services to compete, and thereby to continue to provide public service benefits.³⁸⁵ The Commission also revised its broadcast and cable/MDS ownership attribution rules. The attribution rules define what constitutes a "cognizable interest" for purposes of applying the ownership rules.³⁸⁶

104. These changes permit further consolidation in the broadcast industry. Two major proposed transactions have been announced. The first is the merger of Viacom, Inc., and CBS Corporation.³⁸⁷ The second is a "strategic investment" by NBC for the purchase of 32% of PaxTV. Additionally, NBC has the option to increase its ownership up to a total of 49% of PaxTV after February 1, 2002, and to have operating control of the company, if Commission rules will allow NBC this increase.³⁸⁸

105. National networks have also introduced "repurposing" of content. Repurposing generally involves a re-run of broadcast content on a cable network shortly after it airs originally on network affiliate stations. Repurposing has occurred on both cable networks affiliated with the broadcaster (e.g., NBC showing *Today* on MSNBC) and on unaffiliated cable networks (e.g., USA showing *Law & Order, Special*

³⁸⁴ NCTA, *Viewing Shares: Broadcast Years 1987/1988-1997/1998*, Cable Television Developments, Summer 1999, at 5 (citing Nielsen Media Research statistics).

³⁸⁵ *Review of the Commission's Regulations Governing Television Broadcasting Television Satellite Stations Review of Policy and Rules*, MM Docket Nos. 91-221 and 87-8, Report And Order, 14 FCC Rcd 12903 (1999).

³⁸⁶ *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*, MM Docket Nos. 94-150, 92-51, 87-154, Report And Order, 14 FCC Rcd 12559 (1999).

³⁸⁷ Viacom, Inc., *Viacom and CBS To Merge In Largest Media Transaction Ever* (press release), Sept. 7, 1999. Some divestiture may still be required under Commission rules, including the sale by Viacom of the UPN network.

³⁸⁸ Paxson Communications Corporation, *NBC Makes Strategic Investment In Paxson Communications, Creating Path To Second National Distribution Outlet* (press release), Sept. 16, 1999.

Victim's Unit, an NBC show).³⁸⁹ NBC is also reportedly, in relation to the above-mentioned deal with PaxTV, considering repurposing some of its programming to PaxTV stations.³⁹⁰

106. DTV could potentially enhance the ability of broadcasters to compete in the video marketplace. DTV allows broadcasters to transmit one very high quality signal (High Definition Television or HDTV), several standard definition signals, or ancillary services in addition to broadcast signals. As stated in the *1997 Report*, affiliates of the top four networks in the top ten markets were required to air digital signals by May 1, 1999.³⁹¹ Thirty-two of these stations are now on the air with DTV facilities.³⁹² As of December 8, 1999, all of the top ten markets had at least one affiliate of the top four networks broadcasting DTV service, and five of those markets had all of the affiliates of the top four networks broadcasting DTV. One or more affiliates in Chicago, Washington, D.C., New York City, Boston, and Atlanta have been granted extensions to complete construction.³⁹³ November 1, 1999 was the deadline for the four network affiliates in Markets 11-30 (79 stations) to complete construction of their DTV facilities and to file license applications. As of December 8, 1999, 40 of these DTV permittees have filed requests for extension of time to construct their facilities; 36 have completed construction and are on the air; 3 have special temporary authority to be on the air with DTV pending final action on their application. As of December 8, 1999, 267 DTV construction permits had been granted, with in excess of 969 additional applications pending.³⁹⁴ At present, 111 stations broadcast DTV signals.³⁹⁵ In addition, reports from the industry indicate that at least 27,000 DTV sets have been sold as of August 1999,³⁹⁶ and the first digital VCR went on sale in July 1999.³⁹⁷ Several cable MSOs and broadcast networks have reached agreements for the carriage of broadcast digital signals, including HDTV format and any other new services.³⁹⁸

³⁸⁹ See, e.g., John Higgins, *Cable's 2nd-Chance Strategy*, *Broadcasting & Cable*, Oct. 25, 1999, at 62 and Mike Reynolds, *NBC Gives Viewers Double Dose of Today*, *Cable World*, Oct. 4, 1999 at 6. Analysts report that USA Networks was able to gain the right to air *Law & Order, Special Victims Unit* because its studios produce the show.

³⁹⁰ Steve McClellan, *The Peacocking of Pax*, *Broadcasting & Cable*, Oct. 11, 1999, at 68.

³⁹¹ *1997 Report*, 13 FCC Rcd at 1091-92 ¶ 94.

³⁹² National Association of Broadcasters, *Free, Over-the-Air Digital Television: Broadcasters Deliver Digital On-Time* (press release), Oct. 6, 1998.

³⁹³ For an updated list on the status of DTV broadcasts, see the FCC website <http://www.fcc.gov/mmb/vsd/files/dtvsum.html>.

³⁹⁴ For a full list of pending and granted DTV construction permits, see the FCC website, <http://www.fcc.gov/mmb/vsd/dtvstatus.html>.

³⁹⁵ *Id.*

³⁹⁶ Monica Hogan, *HDTV Feeling the Pains of Slow Growth*, *Multichannel News*, Aug. 9, 1999. Other reports indicate that demand for new digital television sets is outstripping supply, creating backlogs in retail stores. See *DTV Demand Exceeding Supply in Retail Shops*, *Comm. Daily*, Nov. 29, 1999, at 4.

³⁹⁷ *Mass Media*, *Comm. Daily*, July 12, 1999. Panasonic manufactures the digital VCR, and reports that it is currently compatible only with Panasonic television sets. If other companies adopt the same copy-protection scheme, however, the digital VCR will also work with their television sets. In addition, the VCR is compatible with analog VCRs.

³⁹⁸ See, e.g., *AT&T Broadband and Internet Services, NBC and AT&T Broadband & Internet Services Enter Into Long-Term Agreement* (press release), June 11, 1999.

Simulcasts of some programming are currently available, and the major networks are planning more for the current season.³⁹⁹

107. At this point, there are still no “cable-ready” DTV sets. This generally means that in order to use a DTV set with a cable system, a consumer will need to use a set-top box. The use of set-top boxes for all television systems, not just those connected to cable, is expected to increase in popularity as consumer interest in the other attributes of DTV, including data transmission, increases. Consumer electronics manufacturers individually and through the Consumer Electronics Association (“CEA”), formerly the Consumer Electronics Manufacturers Association, are continuing to meet with representatives from OpenCable, individual cable systems, and NCTA in FCC-supervised sessions with the goal of reaching agreement on the standards necessary to produce a “cable-ready” set. The IEEE 1394 has become the adopted standard and accepted means of connecting the DTV set with a set-top box.⁴⁰⁰ The issue of copy protection and adequate protection of digital copying remains an issue. (Unlike analog content, digital copies can be replicated pristinely and distributed in near-perfect condition.) The 5C standard (the Digital Transmission Content Protection “DCTP” Standard⁴⁰¹ has been generally adopted by the manufacturers, CableLabs, and the Motion Picture Association of America (“MPAA”), but there remain questions about licensing language and implementation. There continue to be questions as to how best to protect digital content from being copied whether it involves cable or satellite movies, over-the-air broadcast, or transmission over the Internet. Since consumers’ adoption of DTV is contingent upon the availability of high-level digital content, the Commission continues to supervise and encourage negotiations on copy protection issues in the hope of facilitating the adoption of copy protection standards.

108. Questions have been raised about indoor DTV reception.⁴⁰² With DTV, as with the existing NTSC system, there will continue to be locations where reception without an outdoor antenna will be problematic. The expectation is, however, that reception will continue to improve with the installation of improved chips in next generation DTV receivers. In September, the Commission’s Office of Engineering and Technology (“OET”) reexamined the DTV modulation standard in response to a request from Commissioner Ness. In its report, OET recommended retention of the current 8-Level Vestigial Side-Band

³⁹⁹ See, e.g., Techweb, *DTV Sails Despite High Costs*, <http://www.techweb.com/wire/story/TWB19990420S0006.html> and Comm. Daily, *Broadcasters Express Confidence in DTV Reception*, Aug. 5, 1999, at 6.

⁴⁰⁰ NCTA, *Inter-Industry Consensus Reached on IEEE-1394 Digital Interface Specification* (press release), Nov. 2, 1998. In a letter to Decker Anstrom, President and CEO of the NCTA, and to Gary Shapiro, President of the Consumer Electronics Manufacturers Association (“CEMA”), Chairman Kennard had called upon the cable and the consumer electronics industries to work together to solve this problem. Specifically, Chairman Kennard had proposed that a standard be developed by November 1, 1998, so that compatible televisions could be available for sale by November 1999. The NCTA and CEMA standards agreement was in response to Chairman Kennard’s letter. Letter from William E. Kennard, Chairman, FCC, to Decker Anstrom, President and CEO, NCTA and Gary Shapiro, President, CEMA, Aug. 13, 1998.

⁴⁰¹ The “5C” companies are Intel, Toshiba, Sony, Hitachi, and Matsushita. See *1998 Report*, 13 FCC Rcd at 24347 ¶ 100.

⁴⁰² See Petition for Expedited Rulemaking filed by Sinclair Broadcast Group, Inc., Oct. 8, 1999, requesting the current 8-VSB standard be expanded to include COFDM as well. The Commission has not yet acted on Sinclair’s petition, and nothing herein is intended to prejudge its resolution. See also Opposition to Petition for Expedited Rulemaking and Motion for Its Immediate Dismissal filed by Consumer Electronics Manufacturers Association, Oct. 14, 1999.

Standard (“8-VSB”) after concluding that the relative benefits of changing to Coded Orthogonal Frequency Division Multiplex (“COFDM”) were unclear and would not outweigh the costs of such a revision.⁴⁰³

109. DTV has the potential to allow broadcasters to become more effective competitors with cable operators in the MVPD market.⁴⁰⁴ Possible new broadcasting services include HDTV, multicasting, combination of frequencies to provide packages of services, and interactive services such as delivering Internet content to computers. For example, Geocast and Hearst-Argyle Television recently signed an agreement to allow Geocast to use Hearst-Argyle DTV spectrum to deliver Internet content to computers. Geocast reports that it anticipates similar agreements with larger broadcasters.⁴⁰⁵ Despite these possibilities, however, it is not clear how DTV services will develop, or how significant a competitor broadcast will be in the changing MVPD market.

G. Other Entrants

1. Internet Video

110. Since our last *Report*, real-time and downloadable video accessible over the Internet (“Internet video”) has become more widely available.⁴⁰⁶ Access to and use of the Internet is increasing, as are the number of products available for accessing Internet video.⁴⁰⁷ In addition, media companies continue to offer increasing amounts of video over their Websites. However, at this time, the quality of most long form programming offered over the Internet is an open question and current Internet capacity limits the number of viewers who can access long form Internet video simultaneously.⁴⁰⁸

111. Over the past year, Apple Computer and Microsoft began offering software for accessing Internet video.⁴⁰⁹ Real Networks, however, remains the dominant provider of Internet video software.⁴¹⁰ As

⁴⁰³ See Office of Engineering and Technology, *DTV Report on COFDM and 8-VSB Performance*, Sept. 30, 1999, at 5.

⁴⁰⁴ *1998 Report*, 13 FCC Rcd at 24347-8 ¶ 101.

⁴⁰⁵ *Geocast to Sign Data Deal With TV*, Comm. Daily, Oct. 7, 1999.

⁴⁰⁶ Internet video is also known as “streaming video,” because data are “streamed” over the Internet to provide continuous motion video.

⁴⁰⁷ By July 1999, there were 42 million households connected to the Internet, and it was estimated that there were more than 100.7 million adult Internet users in the United States. Of all Internet users, 17% claim to use the Internet only at work, 40% state they use the Internet only at home, and 43% indicate they use it both at work and at home. *Internet User Trends: Midyear 1999*, Strategis Group, July 1999, at 15, 38, and 53.

⁴⁰⁸ Internet video still has not reached the quality of traditional video because of limited bandwidth and transmission delays of the Internet itself. See Joyce Slaton, *Prime Time for NetTV?*, Wired News, Sept. 27, 1999; New York Times Staff, *A Satellite Model for Streaming Media*, The New York Times on the Web, Oct. 11, 1999, <http://www.nytimes.com/library/tech/99/10/biztech/articles/11data.html>.

⁴⁰⁹ Gary Arlen, *Steam-rolling Into Video Reality*, Multichannel News, July 19, 1999, at 112 (“Arlen, July 1999”); Karen Brown, *Video Streaming on the Cusp of Reality*, Cable World, June 7, 1999, at 104. In the *1998 Report*, we reported that Real Network’s RealPlayer is a leader in software for Internet video playback. See *1998 Report* 13 FCC Rcd at 24349 ¶ 104.

of July 1999, it provided service to more than 80% of the streaming video audience.⁴¹¹ Apple's QuickTime⁴¹² and Microsoft's Windows Media and Media Player,⁴¹³ like Real Network's RealPlayer,⁴¹⁴ can be downloaded directly from the Internet.

112. There also has been an increase in the number of software products designed to enhance the viewing of streaming video. For example, Virage and Excalibur Technologies sell software that searches the Internet for video, and enables users to access specific visual segments.⁴¹⁵ ChannelSeek and The Media Channel catalogue and list available Internet video.⁴¹⁶ iBEAM Broadcasting has developed a technology that allows it to deliver streaming video to hundreds of thousands of simultaneous Internet users, promising 100% stream availability.⁴¹⁷ As of October 1999, iBEAM had entered into partnerships with more than 60 ISPs to deliver its product.⁴¹⁸ Lariat Software offers a product that measures and reports the viewership of streaming video.⁴¹⁹

113. The amount of Internet video content also has increased over the last year. Streaming content has become common on many Web pages.⁴²⁰ In addition, many Web pages are specifically designed to offer Internet audio and video. For example, Broadcast.com, which refers to itself as an "Internet broadcast network," expanded its offerings in 1998 and the first half of 1999.⁴²¹ Broadcast.com offers connectivity to live radio and television broadcasts featuring business and sporting events, full-length CDs, concerts, news, audio books, and various other audio and visual options.⁴²² BreakTV.com, iCast, TV

(Continued from previous page) _____

⁴¹⁰ See 1998 Report 13 FCC Rcd at 24349 ¶ 104.

⁴¹¹ Arlen, July 1999; See also <http://www.real.com/company/index.html>.

⁴¹² <http://www.apple.com/quicktime/>.

⁴¹³ <http://www.microsoft.com/windows/windowsmedia/en/default.asp>.

⁴¹⁴ <http://www.real.com>.

⁴¹⁵ Arlen, July 1999; See also <http://www.virage.com>.

⁴¹⁶ Arlen, July 1999; See also <http://www.mediachannel.com/info.htm>; <http://www.channelseek.com>.

⁴¹⁷ John Townley, *iBEAM Broadcasting Announces Alliances With 60 Providers*, Streaming Media News, Oct. 14, 1999, http://www.internetnews.com/streamingmedianews/article/0,1087,8161_218231,00.html; New York Times Staff, *A Satellite Model for Streaming Media*, The New York Times on the Web, Oct. 11, 1999, <http://www.nytimes.com/library/tech/99/10/biztech/articles/11data.html>.

⁴¹⁸ *Id.*

⁴¹⁹ Arlen, July 1999; See also <http://www.lariat.com>

⁴²⁰ Karen Brown, *Video Streaming on the Cusp of Reality*, Cable World, June 7, 1999, at 104.

⁴²¹ Joyce Slaton, *Prime Time for NetTV?*, Wired News, Sept. 27, 1999.

⁴²² <http://www.broadcast.com>.

on the Web, and Den TV.com, also offer numerous content selections.⁴²³ In October 1999, the National Football League Quarterback Club bought equity in Pseudo Programs, Inc., whose Pseudo.com began webcasting in December 1999, offering live, animated and interactive programming of football and other sports.⁴²⁴

114. Broadcast and non-broadcast networks are also offering increased amounts of streaming video. On November 17, 1999, ABC webcast a portion of *The Drew Carey Show* simultaneously with its television broadcast.⁴²⁵ On October 9, 1999, Cisco Systems, in conjunction with the United Nations Development Program, webcast a live, world-wide, all day concert called NetAid, which was also cablecast on VH-1 and MTV.⁴²⁶ Organizers of NetAid claimed that the webcast of the concert was the most watched video streaming event ever to occur over the Internet.⁴²⁷ In October 1999, ABC news launched a thrice-weekly webcast anchored by Sam Donaldson.⁴²⁸ The advertiser-supported webcast is 15 minutes in duration.⁴²⁹

115. Because of technical demands, broadband networks provide the optimal venue for the delivery of streamed video content.⁴³⁰ While there is much streaming video content available to viewers who access the Internet via telephone dial-up connections, some companies, such as Like Television, offer content exclusively or almost entirely for broadband consumers.⁴³¹ However, access to streaming video over cable broadband networks can be limited. Online provider @Home currently reserves the right to limit customers to 10-minute streaming segments.⁴³²

⁴²³ Arlen, July 1999; See also <http://www.icast.com>; <http://www.tvontheweb.com>; <http://www.dentv.com>; <http://www.breaktv.com>.

⁴²⁴ Reuters, *NFL Quarterbacks Invest In Online TV Programmer*, Excite, Inc., Oct. 13, 1999, <http://news.Excite.com/news/r/991013/01/net-tech-pseudo?printstory=1>.

⁴²⁵ *Drew-cam to Simulcast Comedy*, Cable World, Oct. 18, 1999, at 3. In response to advertisers' concerns, ABC opted not to simulcast the full episode.

⁴²⁶ On October 9, 1999, overlapping concerts were held in Giants Stadium in New Jersey, Wembley Stadium in London, and the Palais des Nations in Geneva, Switzerland. The collective concerts were called "NetAid." Jennifer Mack, *NetAid concert delivers 2.38M Streams*, zdnet, Oct. 11, 1999, <http://www.zdnet.com/filters/printerfriendly/0,6061,2351805-2,00.html>

⁴²⁷ *Id.*

⁴²⁸ Alan Breznick, *ABC Launches Live Video Newscasts on Web*, CableWorld, Oct. 4, 1999, at 10.

⁴²⁹ *Id.*

⁴³⁰ Broadband enables the transfer of data at 300Kbps, the speed at which some media players are able to offer full-screen video streams of thirty frames-per-second, which is widely considered broadcast or cablecast quality video.

⁴³¹ Joyce Slaton, *Prime Time for NetTV?*, Wired News, Sept. 27, 1999. See also <http://www.liketelevision.com>.

⁴³² "...a principal cable partner has the right to block access to certain content, including streaming video segments of more than ten minutes in duration..." At Home Corporation, *Filing 10-K/A for the Year Ended December 31, 1998*, Apr. 28, 1999, at 39.

116. Despite the increase in interest in Internet video, the medium is still not seen as a direct competitor to traditional video services, and industry observers believe video streaming is in the formative stages of development.⁴³³ Internet video is still used primarily for short news segments, sports clips, and other brief video excerpts.⁴³⁴

2. Home Video Sales and Rentals

117. The home video marketplace includes the sale and rental of video cassettes, laser discs, and digital video or versatile discs (“DVDs”). In previous reports, we considered home video sales and rentals as part of the video programming market since they provide video services⁴³⁵ similar to the premium and pay-per-view services offered by MVPDs.⁴³⁶ We noted that premium and pay-per-view cable services are not regulated because they are competitive with the home video sales and rental market, and also that the home video retail industry is highly competitive.⁴³⁷ It is estimated that 82% of all U.S. households own at least one VCR.⁴³⁸ About two million homes have laser disc players.⁴³⁹ In the two years since being introduced, the number of homes with DVD players has reached about the same number.⁴⁴⁰ There are between 25,000 and 30,000 video specialty stores selling or renting home video programming,⁴⁴¹ and several of these retailers sell video programming through Internet sites.⁴⁴² The largest stores carry at least 7,500 titles in

⁴³³ Karen Brown, *Video Streaming on the Cusp of Reality*, Cable World, June 7, 1999, at 104.

⁴³⁴ *Id.*

⁴³⁵ Programming available for rent or purchase in the various home video formats now include theatrically-released movies, direct-to-video titles, certain movies originally shown on premium channels, documentaries, and concerts. Viacom Inc., SEC Form 10-K405, March 31, 1999 (“Viacom 10-K”).

⁴³⁶ See, e.g., *Competition, Rate Deregulation and the Commission’s Policies Relating to the Provision of Cable Television Service*, MM Docket No. 89-600, Report, 5 FCC Rcd 4962, 5019-20 ¶¶ 109-110 (1990); 1995 Report, 11 FCC Rcd at 2118-9 ¶ 121; 1998 Report, 13 FCC Rcd at 24350 ¶106. Viacom states that its Blockbuster Video Stores compete with direct-to-home satellite services, cable, and broadcast television. Viacom 10-K. See also Hollywood Entertainment Corporation, SEC Form 10-K, filed March 31, 1999 (“Hollywood Entertainment 10-K”); TiVo Inc., SEC Form S-1/A, filed September 23, 1999 (“TiVo S-1/A”).

⁴³⁷ *1997 Report*, 13 FCC Rcd at 1096-7 ¶¶ 103-4.

⁴³⁸ *U.S. Industry & Trade Outlook '99*, The McGraw-Hill Companies and U.S. Department of Commerce/International Trade Administration, at 32-5; Hollywood Entertainment 10-K *citing* Adams Media Research.

⁴³⁹ Tom Shales, *Shall We Dance? With DVD, Indeed*, Washington Post, June 2, 1999, at C1.

⁴⁴⁰ *Id.*

⁴⁴¹ Hollywood Entertainment 10-K *citing* Video Software Dealers Association (“VSDA”) statistics.

⁴⁴² For example, Hollywood Entertainment acquired Reel.com as a distribution channel to complement its video stores. Hollywood Entertainment 10-K. Best Buy and Blockbuster also have Internet sites for purchasing video programming; see <http://www.bestbuy.com> and <http://www.blockbuster.com>, respectively.

video cassette format.⁴⁴³ Such video programming is also available at a variety of other retail outlets, including supermarkets, pharmacies, convenience stores, as well as at public libraries.⁴⁴⁴ There are over 25,000 titles available in video cassette format.⁴⁴⁵ There are 18,000 titles available on laser disc, and about 2,800 titles available on DVD, although this number is expected to grow rapidly and could reach 5,000 by the end of 1999.⁴⁴⁶ The video retail industry is the largest source of revenue for movie studios, generating approximately \$6.7 billion (or 48.5%) of the estimated \$13.8 billion domestic studio revenue in 1998.⁴⁴⁷

118. In the last year, DVD player sales have continued to be strong both for low-end models costing about \$300 and for high-end players priced over \$1000.⁴⁴⁸ However, unlike VCRs that can cost as little as \$120, DVD players cannot record programming.⁴⁴⁹ The number of homes with DVD players is expected to grow to 4 million this year.⁴⁵⁰ Last year, we reported on Digital Video Express (“Divx”), a variation of the DVD format introduced nationwide in September 1998 by Circuit City and various partners.⁴⁵¹ Divx was intended to be a pay-per-view alternative for digital discs using a Divx-enabled DVD player connected to a telephone line that forwarded playing and billing information to a central computer.⁴⁵² In June 1999, Circuit City and its partners announced that they were abandoning the Divx format.⁴⁵³ The failure of Divx has been attributed to consumers’ resistance to having their viewing preferences tracked through the telephone billing system, the lack of support of the movie studios, and the limited retail availability of Divx players due to the unwillingness of Circuit City’s competitors to carry its product.⁴⁵⁴

⁴⁴³ Hollywood Entertainment 10-K.

⁴⁴⁴ Hollywood Entertainment 10-K; Viacom 10-K.

⁴⁴⁵ <http://www.cemacity.org/mall/product/video/files/hstryvcr.htm>.

⁴⁴⁶ Tom Shales, *Shall We Dance? With DVD, Indeed*, Washington Post, June 2, 1999, at C1.

⁴⁴⁷ Hollywood Entertainment 10-K *citing* statistics from Paul Kagan Associates; *see also 1997 Report*, 13 FCC Rcd 1096-7, ¶¶ 103, 105.

⁴⁴⁸ The NPD Group, Inc., *DVD Sales Soar As Two Consumer Markets Evolve, Reports INTELECT ASW* (press release), March 23, 1999, http://www.npd.com/corp/press/press_9903233.htm.

⁴⁴⁹ *Now Playing: DVD/DIVX*, Consumers Reports, July 1999, at 26.

⁴⁵⁰ <http://www.videobusiness.com/news/P3177.asp>. As of June 1999, more than 2.3 million DVD players had been shipped since their debut in early 1997. Daniel Greenberg and Mike Musgrove, *Digital Video Disarray*, Washington Post, June 25, 1999, Weekend at 70.

⁴⁵¹ *1998 Report*, 13 FCC Rcd at 24352 ¶109.

⁴⁵² *1997 Report*, 13 FCC Rcd at 1097-8 ¶ 106; *1998 Report*, 13 FCC Rcd at 24352 ¶ 109. *See also* Circuit City Stores, SEC Form 10-K, filed May 25, 1999.

⁴⁵³ Divx players have been discontinued and the company plans to shut down its system on June 30, 2001. Daniel Greenberg and Mike Musgrove, *Digital Video Disarray*, Washington Post, June 25, 1999, Weekend at 70.

⁴⁵⁴ Stephanie Stoughton, *Circuit City’s Slipped Disk*, Washington Post, June 17, 1999, at E1.

119. A new home video technology, the personal video recorder (“PVR”), was recently introduced. PVRs are being developed by two companies, TiVo Inc. and Replay Networks Inc.⁴⁵⁵ A PVR is a digital video recorder, similar in size to a VCR, which records and stores television programming on a disc drive.⁴⁵⁶ Because it uses random access technology, a PVR can pause, rewind, and perform slow motion and instant replay of a live program. A PVR allows a viewer to watch an earlier portion of a program while later portions are still being broadcast and, similarly, to leave and return to a live program without missing any portion of the show. However, PVRs cannot play prerecorded video cassettes or discs. They are intended for use with a service that provides an onscreen programming guide through a telephone connection. The technology can be used to create personal menus, and it can learn a consumer’s television preferences so that it will record programming in accordance with those preferences. PVRs and the onscreen programming guide service are available over the Internet and through toll free telephone numbers. Since September 1999, TiVo’s player, manufactured by Philips, has been sold at by a number of retailers.⁴⁵⁷ The price of a PVR depends on the amount of storage, ranging from \$499 for TiVo’s player with 14 hours of storage to \$1500 for ReplayTV’s player with 28 hours of storage.⁴⁵⁸ A monthly TiVo subscription costs \$9.95 and a lifetime subscription is \$199.⁴⁵⁹ Replay has no monthly fee and relies solely on advertiser support.⁴⁶⁰ According to TiVo, as of June 1999, the number of PVRs sold and subscriptions to its service were “limited.”⁴⁶¹

H. Local Exchange Carriers

120. 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,⁴⁶² (2) provide transmission of video programming on a common carrier

⁴⁵⁵ John Markoff, *2 Makers Plan Introductions of Digital VCR*, New York Times, March 29, 1999, at C13. DirecTV is a partner with TiVo. DirecTV Comments at 19. Other investors in TiVo include Sony Corp. of America, CBS, NBC, Disney, Discovery, Comcast Communications, Cox Communications, Philips, and America Online. Glen Dickson, *Sony Hops on TiVo Train*, Broadcasting & Cable, September 13, 1999, at 38.

⁴⁵⁶ For an additional description of PVRs, see DirecTV Comments at 19; TiVo Internet site, <http://www.tivo.com>; Replay TV Internet site, <http://www.replaytv.com>; Leslie Walker, *Getting Personal With Television*, Washington Post, April 24, 1999, at E1.

⁴⁵⁷ Sony also plans to manufacture PVRs for TiVo. Glen Dickson, *Sony Hops on TiVo Train*, Broadcasting & Cable, September 13, 1999, at 38; CableFAX Daily, September 9, 1999, at 2; Circuit City advertising supplement to the Washington Post, November 7, 1999.

⁴⁵⁸ <http://www.tivo.com>; <http://www.replaytv.com>.

⁴⁵⁹ <http://www.tivo.com>.

⁴⁶⁰ <http://www.replaytv.com>; John Markoff, *2 Makers Plan Introductions of Digital VCR*, New York Times, March 29, 1999, at C13.

⁴⁶¹ TiVo S-1/A.

⁴⁶² 47 U.S.C. § 571(a)(1).

basis under Title II of the Communications Act;⁴⁶³ (3) provide video programming as a cable system under Title VI of the Communications Act;⁴⁶⁴ or (4) provide video programming by means of an open video system ("OVS").⁴⁶⁵

121. In previous *Reports*, we noted that while LECs were not yet a national competitor in the MVPD market, their competitive presence was growing.⁴⁶⁶ Currently, it appears that the rate of entry may be slowing by even the most aggressive LECs, and several LECs have reduced or eliminated their MVPD efforts. The decline in the rate of entry of LECs into the MVPD market may indicate that some LECs have already entered the geographic markets they consider most profitable, and are now only filling gaps in areas of service.

1. Current and Planned LEC Video Delivery

122. **MMDS.** BellSouth remains the largest LEC investor in MMDS licenses and systems.⁴⁶⁷ Since the *1998 Report*, however, BellSouth has not launched digital MMDS services in any additional localities.⁴⁶⁸ BellSouth's MMDS service areas cover approximately 3.5 million homes in Florida, Atlanta, Louisiana, and Kentucky.⁴⁶⁹ As of the third quarter of 1999, BellSouth had 130,000 MMDS subscribers.⁴⁷⁰ In addition, GTE operates a digital MMDS system in Oahu, Hawaii.⁴⁷¹

⁴⁶³ 47 U.S.C. § 571(a)(2).

⁴⁶⁴ 47 U.S.C. § 571(a)(3).

⁴⁶⁵ 47 U.S.C. § 571(a)(3)-(4).

⁴⁶⁶ *1995 Report*, 11 FCC Rcd at 2110 ¶ 103; *1996 Report*, 12 FCC Rcd at 4394 ¶ 67; *1997 Report*, 13 FCC Rcd at 1099 ¶ 108; *1998 Report*, 13 FCC Rcd at 24353 ¶ 111.

⁴⁶⁷ *1998 Report*, 13 FCC Rcd at 24354 ¶ 112.

⁴⁶⁸ As reported previously, BellSouth serves New Orleans, Atlanta, and Orlando, Florida with digital MMDS systems. BellSouth also reports that it offers analog MMDS service in Ft. Myers and Lakeland, Florida, and Louisville, Kentucky. BellSouth plans to launch digital MMDS service soon in Jacksonville and Daytona Beach, Florida, and holds the rights to offer this service to Miami, Florida. BellSouth Comments at 2. See also *1998 Report*, 13 FCC Rcd at 24354 ¶ 112.

⁴⁶⁹ BellSouth Comments at 2.

⁴⁷⁰ William N. Deatherage and Bette Massick Colombo, "Telecommunications Services: Opinions, News, & Latest Results," *Equity Research – Telecommunications*, Bear Sterns & Co., Inc., Nov. 1999, at 173.

⁴⁷¹ *1998 Report*, 13 FCC Rcd at 24534 ¶ 112. On October 2, 1998, GTE Corporation and Bell Atlantic Corporation filed joint applications under Sections 214 and 310(d) of the Communications Act, 47 U.S.C. §§ 214 and 310(d), requesting Commission approval of the transfer of control of licenses and authorizations controlled or requested by GTE or its affiliates or subsidiaries to Bell Atlantic. This transfer of control would take place as the result of a proposed merger of Bell Atlantic and GTE. This merger is still under Commission review. For more information on the merger, see http://www.fcc.gov/ccb/Mergers/BA_GTE/welcome.html.

123. ***In-Region Cable Franchises.*** Ameritech continues to be the most significant LEC provider of in-region cable service. As of November 4, 1999, Ameritech had acquired 111 cable franchises in Illinois, Indiana, Michigan, Ohio, and Wisconsin, potentially passing more than 1.7 million homes. Ninety-eight of Ameritech's cable franchises were operational as of November 4, 1999,⁴⁷² and it was the 23rd largest MSO in the country as of June 1999, serving 250,000 subscribers.⁴⁷³ Ameritech continues to encounter significant competitive responses by incumbent cable operators.⁴⁷⁴

124. At the time of the *1998 Report*, in addition to its MMDS properties, BellSouth had acquired 18 cable franchises in Alabama, Florida, Georgia, South Carolina, and Tennessee, giving it the potential of passing 1.2 million homes. At that time, BellSouth provided service in nine of its franchised areas.⁴⁷⁵ BellSouth now reports that it holds 21 franchises with the potential to pass 1.4 million homes. BellSouth states that it provides service in 12 of its franchise areas, and that it is negotiating with localities for additional franchises.⁴⁷⁶ We previously reported that GTE received ten competitive cable franchises, and one non-competitive franchise.⁴⁷⁷ GTE's non-competitive franchise in Cerritos, California, and the

⁴⁷² As of November 4, 1999, the active franchises were located in: *Illinois*: Glendale Heights, Naperville, Glen Ellyn, Arlington Heights, Elgin, Prospect Heights, Des Plaines, Schaumburg, Streamwood, Chicago (Area 5), Crestwood, South Holland, Oak Forest, Unincorporated DuPage County, Robbins, Mount Prospect; *Michigan*: Canton Township, Plymouth, Plymouth Township, Northville, Fraser, Northville Township, Southgate, Garden City, Troy, Wayne, Lincoln Park, Sterling Heights, Clinton, Mount Clemens, St. Clair Shores, Allen Park, Utica, Melvindale, Royal Oak, Madison Heights, Warren, Trenton, Pleasant Ridge, Ferndale, Huntington Woods, Clawson, Berkley, Roseville, Eastpointe, Westland, Riverview, Taylor, Hazel Park, Woodhaven, Rochester Hills, Center Line, Harrison Township, Rochester, Shelby Township, Grosse Ile, Dearborn Heights; *Ohio*: Hilliard, Upper Arlington, North Olmsted, Columbus, Berea, Perry Township, Worthington, Clinton Township, Riverlea, Blendon Township, Sharon Township, Fairview Park, Franklin Township, Mifflin Township, Norwich Township, Marble Cliff, Valleyview, Minerva Park, Madison Township, Westlake, Jackson Township, Dublin, Prairie Township, Middleburg Heights, New Rome, Brice, Grandview Heights, Whitehall, North Royalton, Grove City, Brooklyn, Shaker Heights, Brook Park, Strongsville, Linndale, Garfield Heights, Gahanna, Westerville, Urbancrest, Bexley, Reynoldsville. The franchises which had not yet begun service were located in: *Illinois*: Vernon Hills, Calumet City, Glenview, Palos Park, Chicago Heights, Harvey; *Indiana*: Hammond; *Michigan*: Malcomb Township; *Ohio*: Canal Winchester, Valley View, Brecksville, Independence, Cuyahoga Heights. Ameritech New Media, *Ameritech New Media Cable Franchises* (news release), Nov. 4, 1999.

⁴⁷³ Ameritech Comments at iii.

⁴⁷⁴ Ameritech Comments at 1-3 and Exhibit 1.

⁴⁷⁵ *1998 Report*, 13 FCC Rcd at 24355 ¶ 114.

⁴⁷⁶ The active franchises are located in: Vestavia Hills, Alabama; St. Johns' County, Dade County, and Pembroke Pines, Florida; Counties of Cherokee, DeKalb, and Gwinnett and Cities of Chamblee, Duluth, Lawrenceville, and Woodstock, Georgia; and Daniel Island, South Carolina. BellSouth Comments at 2.

⁴⁷⁷ The non-competitive franchise is in Cerritos, California. The competitive franchises are: Clearwater, St. Petersburg, Penellas County, Safety Harbor, and Dunedin, Florida; Camarillo, Thousand Oaks, Port Hueneme, Oxnard, and Ventura County, California. *1998 Report*, 13 FCC Rcd at 24355 ¶ 114.

competitive franchises in Ventura County, California, and St. Petersburg and Clearwater, Florida, are operational.⁴⁷⁸

125. SNET, which was recently acquired by SBC Communications, holds a statewide cable franchise in Connecticut, and currently offers service to 14 localities.⁴⁷⁹ On August 25, 1999, SNET applied for and received permission from the Connecticut Department of Public Utility Control (“DPUC”) to suspend construction of its statewide Hybrid Fiber-Coaxial (“HFC”) network while it considers alternative technologies for video deployment, such as digital subscriber line (“DSL”) technology.⁴⁸⁰ SNET maintains that HFC is not an efficient technology for deployment of video services. The DPUC required SNET to continue video service where it has already begun to do so, and declined to relieve SNET of any of its statewide construction obligations. SNET is required to file a proposal on new technologies and for statewide construction by October 1, 2000.⁴⁸¹

126. U S West continues to operate video systems in Omaha, Nebraska, and Phoenix, Arizona. In Phoenix, U S West uses very high speed digital subscriber line (“VDSL”) for distribution of video, high-speed Internet access, and telephone service over existing copper telephone lines, and is still the only company in the country using this distribution technology.⁴⁸² In addition, U S West announced that it has begun trials of an interactive service that integrates customers’ telephone, Internet access, and existing television service.⁴⁸³ This service, delivered over dial-up or DSL connections to television sets, allows customers to switch between Web surfing and television watching, to do both simultaneously, to view caller ID information on their television screens, to answer the telephone via a speakerphone on a set-top box, and to check e-mail. Full-scale deployment of this service was expected in the fall,⁴⁸⁴ but has not yet occurred.

127. Last year, we reported on concerns that SBC, then in the process of purchasing Ameritech, might sell or abandon Ameritech’s cable overbuild efforts, given that SBC previously sold or abandoned PacBell MVPD services. In addition, SBC’s Chairman Edward Whitacre, on May 19, 1998, had declined to commit to maintain Ameritech’s video efforts.⁴⁸⁵ Recently, Ameritech suspended deployment of new cable

⁴⁷⁸ GTE Corp., <http://www.gte.com/products/prods/americas.html>. GTE reports that it has approximately 102,000 subscribers to its cable systems, and that it is offering cable modem service in some of those areas. <http://www.gte.com/aboutgte/organization/business.html>. GTE also reports that it offers “mainStreet” interactive television in Clearwater, Florida and Thousand Oaks, California. <http://www.gte.com/products/prods/6-23-97-0.html>.

⁴⁷⁹ SNET Corp, <http://www.snet.com/americast/amermain.htm>.

⁴⁸⁰ State of Connecticut, Department of Public Utility Control, *Application of SNET Personal Vision, Inc., To Modify Its Franchise Agreement*, Docket No. 99-04-02, Aug. 25, 1999.

⁴⁸¹ *Id.*

⁴⁸² *1998 Report*, 13 FCC Rcd at 24356 ¶ 114.

⁴⁸³ U S West, *U S West Begins 3-City Trial of Nation’s First Service to Integrate Customers’ Telephone & Internet With Existing TV Service* (news release), June 21, 1999. The service is currently in trials with U S West employees in Denver, Minneapolis, and Phoenix.

⁴⁸⁴ *Id.*

⁴⁸⁵ *1998 Report*, 13 FCC Rcd at 24356-7 ¶ 115.

operations and suspended negotiation of new franchise agreements.⁴⁸⁶ An SBC spokesman said that the operations would be suspended until a “deep review” of all business operations was completed.⁴⁸⁷

128. **OVS.** Although OVS is one of four means for LEC entry into video, the OVS rules do not preclude non-LECs from becoming OVS operators. Therefore some of the companies certified to provide OVS service are not LECs. The Commission has certified 13 OVS operators to offer OVS service in 28 areas, with some of the areas overlapping.⁴⁸⁸

129. RCN owns the only operating open video systems and holds OVS certifications in nine areas. RCN reports that it currently operates open video systems in areas surrounding the City of Boston, within the New York City metropolitan areas, and within and surrounding Washington, D.C.⁴⁸⁹ RCN has somewhat less than 6,000 OVS subscribers in the areas around Boston, 50,000 OVS subscribers in New York City, and 3,000 OVS subscribers in the Washington, D.C., area. These systems also offer subscribers high-speed Internet access, and local and long distance telephone service.⁴⁹⁰ In several areas for which it holds OVS certification, or in subsections of these areas, RCN has negotiated cable franchises with local franchising authorities. In these areas, RCN will or is already offering cable service instead of OVS service.⁴⁹¹ RCN states that it has experienced significant competitive response to its offerings.⁴⁹²

130. RCN reports that negotiation for OVS agreements with local authorities typically last three to four months, and proceed far more quickly than traditional cable franchise agreements negotiation. RCN states that its status as a certified OVS operator has allowed it to enter markets rapidly, whether or not it ultimately operates a cable or OVS system in those markets.⁴⁹³ While RCN has had numerous inquiries from unaffiliated video program providers concerning access to its OVS systems, no such entity has yet elected to seek carriage on one of RCN’s OVS systems.⁴⁹⁴ Recently Paul Allen, owner of Charter Communications, made a \$1.65 billion investment in RCN through Vulcan Ventures, Inc. RCN reports that this investment will fully fund its network building plans through 2003.⁴⁹⁵ Other agreements between RCN

⁴⁸⁶ *SBC Reviewing Ameritech Overbuild Plans*, Comm. Daily, Nov. 19, 1999, at 5.

⁴⁸⁷ *Id.*

⁴⁸⁸ MFS has withdrawn its two certifications for New York City and Boston because it does not plan to operate open video systems in those areas. Bell Atlantic, in Dover Township, New Jersey, shut down its system in favor of its distribution agreement with DirecTV. For a complete listing of approved, pending, and denied applications for OVS certification, see <http://www.fcc.gov/csb/csovscer.html>.

⁴⁸⁹ RCN Comments at 5-8.

⁴⁹⁰ *Id.*

⁴⁹¹ *Id.*

⁴⁹² *Id.*

⁴⁹³ *Id.* at 9-10.

⁴⁹⁴ *Id.*

⁴⁹⁵ RCN Corporation, *Paul G. Allen Invests \$1.65 Billion in RCN Corporation* (press release), Oct. 4, 1999.

and Charter call for a joint venture to develop Internet portal services, and for RCN to provide telephony services for Charter in Los Angeles.⁴⁹⁶

131. In the *City of Dallas v. Federal Communications Commission*, the Fifth Circuit U.S. Appeals Court remanded a portion of the Commission's OVS rules, and struck down or confirmed other portions.⁴⁹⁷ Specifically, the court reversed rules that preempted Title VI-like local franchise requirements for OVS operators. The court also: (a) reversed rules that banned LECs that are also cable operators from offering OVS in the absence of effective competition; (b) remanded to the Commission the rules that allowed OVS operators to decide whether to allow in-region cable operators access to the OVS system; and (c) granted BellSouth's request to allow companies to begin construction of video plant before receiving OVS approval. RCN states that "...the decision largely undercuts the regulatory design of, and economic viability of, OVS as a alternative mode of providing MVPD services and creates delay, uncertainty, and added expense for OVS operators."⁴⁹⁸

132. **Barriers to Competition.** BellSouth, Ameritech, and RCN report that they have experienced difficulties obtaining programming.⁴⁹⁹ All mention the actual or potential problem of migration of programs from satellite to terrestrial delivery in order to avoid the program access rules.⁵⁰⁰ Ameritech and BellSouth report difficulty in gaining access to non-vertically integrated networks, and to cable networks owned by the over-the-air broadcast companies.⁵⁰¹ These two commenters also indicate that the trend in the cable industry toward increased horizontal concentration and clustering will continue to exacerbate these problems.⁵⁰² Ameritech, BellSouth, and CCC also report that incumbent cable operators receive steep discounts for popular programming networks, thus putting entrants at a competitive disadvantage.⁵⁰³ Ameritech reports that these discounts cannot be justified by cost-based measures, as Commission rules

⁴⁹⁶ *Id.*

⁴⁹⁷ *City of Dallas v. Federal Communications Commission*, 165 F.3d 341 (5th Cir. 1999), recon. den. May 28, 1999. The Commission implemented these changes in *Implementation of Section 302 of the Telecommunications Act of 1996*, CS Docket No. 96-46, Order on Remand, FCC 99-341 (rel. Nov. 19, 1999).

⁴⁹⁸ RCN Comments at vi.

⁴⁹⁹ Ameritech Comments at 5; BellSouth Comments at 4; RCN Comments at 18. *See also* CCC Reply Comments at 2-3.

⁵⁰⁰ Ameritech Comments at 7; BellSouth Comments at 10-11; RCN Comments at 19-20. The program access provisions of the Communications Act require access to vertically integrated programming delivered to cable operators via satellite, but not to programming delivered via terrestrial means.

⁵⁰¹ Ameritech Comments at 5-7; BellSouth Comments at 8-10.

⁵⁰² Ameritech Comments at 9; BellSouth Comments at 5-8.

⁵⁰³ Ameritech Comments at 10; BellSouth Comments at 12-13; CCC Reply Comments at 2-3.

require.⁵⁰⁴ BellSouth states that the Commission has not been sufficiently stringent in applying its program access rules, particularly in regard to migration of programming to terrestrial delivery.⁵⁰⁵

133. The commenters also report that difficulties associated with gaining access to existing MDU inside wiring is disadvantageous for cable competitors, and ask that the Commission take further action to correct this problem.⁵⁰⁶ RCN also asserts that its competitors are using OVS rules to gain access to sensitive competitive data, and that Commission rulings requiring RCN to disclose this information to cable companies have contributed to this problem.⁵⁰⁷ RCN further indicates that it faces increasing difficulty accessing local rights-of-way on fair and reasonable terms.⁵⁰⁸

134. Ameritech and BellSouth recommend that the Commission alter the program access rules regarding migration to terrestrial delivery, access to non-vertically integrated programming, and programming fee discounts. If the Commission believes it lacks the statutory authority to make the requested changes, they ask that the Commission recommend that Congress grant this authority.⁵⁰⁹ BellSouth further recommends that the AT&T-MediaOne merger be conditioned on a commitment that all AT&T-affiliated programming will be made available to alternative MVPDs on nondiscriminatory terms and conditions. Finally, BellSouth urges the Commission to recommend to Congress that the DBS “local into local” legislation prevent broadcast stations from denying retransmission consent to any MVPD.⁵¹⁰

2. Ruling on Effective Competition

135. The Communications Act provides that a cable operator’s rates are not regulated if the cable system is subject to effective competition.⁵¹¹ The 1996 Act amended the effective competition provision of the statute in order to address competition from LECs, LEC affiliates, or MVPDs using LEC facilities.⁵¹² In a *Report and Order* that implemented the new statutory language, the Commission determined that effective competition exists where the LEC video service “substantially overlaps” the incumbent cable operator’s

⁵⁰⁴ Ameritech Comments at 10-13.

⁵⁰⁵ BellSouth Comments at 14-17.

⁵⁰⁶ Ameritech Comments at 13-15, 17; BellSouth Comments at 19; CCC Reply Comments at 3-4; RCN Comments at 15-17. RCN has sought a ruling from the Commission that will compel MDU incumbents to share existing wiring with RCN if the MDU owner refuses RCN’s request to install its own wiring. Commission action on this matter is pending.

⁵⁰⁷ RCN Comments at 11-15. The OVS rules allow potential unaffiliated programmers to gain information about open video systems from the system owner. RCN contends that cable operators are inquiring about carriage on its open video systems purely to gain access to sensitive data.

⁵⁰⁸ *Id.* at 22-25.

⁵⁰⁹ Ameritech Comments at 15-17; BellSouth Comments at 18.

⁵¹⁰ BellSouth Comments at 18.

⁵¹¹ 47 U.S.C. § 543(l)(1)

⁵¹² 47 U.S.C. § 543(l)(1)(D).

service in the same franchise area.⁵¹³ Potential as well as actual LEC service can be considered, and the LEC programming service must be comparable to the incumbent cable operator's service.⁵¹⁴ The Commission determined that for a LEC service to be "comparable" it must offer at least 12 channels of video programming, including at least one channel of non-broadcast service.⁵¹⁵

I. Electric and Gas Utilities

136. Utilities are not yet major competitors in the telecommunications or cable markets, but they possess characteristics that could potentially help them become competitively significant. Utilities own fiber-optic networks in some areas, and generally have access to public rights-of-way in the areas they serve. Utilities' provision of non-energy services may increase the value of their existing network and non-network assets. In addition, deregulation of utilities, accompanied by the advent of competition, is prompting more utilities to diversify and find new revenue streams.⁵¹⁶

137. Since the *1998 Report*, several utilities have announced, commenced, or moved forward with ventures involving multichannel video programming distribution. Starpower, a joint venture between RCN and Potomac Electric and Power Company ("PEPCO") in the Washington, D.C. area, reports that it began video service this year.⁵¹⁷ Seren, a wholly owned subsidiary of Minneapolis-based Northern States Power, is currently offering cable and high-speed Internet access service as a cable overbuilder in St. Cloud and Waite Park, Minnesota.⁵¹⁸ It has also received franchise authorizations in Sartell and Sauk Rapids, Minnesota, and Concord, California, and has applied for franchises in Walnut Creek, Danville, Pleasant Hill, Clayton, and unincorporated Contra Costa, California.⁵¹⁹ In Iowa, several cities have authorized their municipal utilities to overbuild the local cable company, including Hawarden and Spencer.⁵²⁰ In addition, the State Supreme Court in Iowa recently found that federal law prevents the state from prohibiting city utilities who operate cable systems from also offering other telecom services, such as telephone service.⁵²¹

⁵¹³ *Implementation of Cable Reform Act Provisions of the Telecommunications Act of 1996*, CS Docket No. 96-85, Report and Order, 14 FCC Rcd 5296 (1999).

⁵¹⁴ *Id.*

⁵¹⁵ *Id.*

⁵¹⁶ *See, e.g., 1998 Report*, 13 FCC Rcd at 24360 ¶¶ 120-121.

⁵¹⁷ *See* ¶ 129 *supra*.

⁵¹⁸ Seren Reply Comments at 1.

⁵¹⁹ *Id.*

⁵²⁰ Linda Haugsted, *Iowa Reinstates Municipal Telco Services*, Multichannel News, Mar. 15, 1999, at 36; Joe Estrella, *City in Iowa OKs Triax, Will Overbuild*, Multichannel News, Mar. 15, 1999, at 18.

⁵²¹ *Iowa Telephone Association v. City of Hawarden*, 589 N.W.2d245 (1999). The federal law cited in the case is 47 U.S.C. § 541(b)(3)(B).

In Ohio, an overbuild system run by the municipal utility in Lebanon began service,⁵²² and the incumbent cable operator, Time Warner, responded with lower prices and the addition of channels and digital services.⁵²³ Southlake, Texas, a community of 20,000 near Fort Worth, granted a cable franchise to Millennium Telecom, which is partially owned by Tri-County Electrical Cooperative, an area electrical cooperative.⁵²⁴ Millennium Telecom is authorized to offer cable, high-speed Internet, long distance telephone, and security services in Southlake. Millennium Telecom already holds a similar authorization in Roanok, Texas, and has a telephone franchise in Fort Worth that it is seeking to expand into cable. Millennium Telecom is also seeking additional franchises in 13 other Texas communities.⁵²⁵ Voters in Alameda, California, voted to grant the municipal electrical utility authority to add video to its system's offerings.⁵²⁶ Finally, a municipal consultant recommended that Little Rock, Arkansas, combine with four neighboring communities to use its municipal electric and water utilities to overbuild the local cable provider.⁵²⁷

III. MARKET STRUCTURE AND CONDITIONS AFFECTING COMPETITION

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

138. In this section, we examine two separate but related markets: (a) the market for the distribution of multichannel video programming to households, and (b) the market for the purchase of video programming by MVPDs. As explained in earlier reports, the market for the distribution of multichannel video programming is local in nature, while the market for the purchase of video programming by MVPDs is regional and national in nature.⁵²⁸ In the distribution market, the buyers are individual households as well as families living in multiple dwelling units ("MDUs"), and the sellers are the MVPDs including cable operators and other video service providers such as DBS providers. In the programming purchasing market, the buyers are MVPDs, and the sellers are programming networks, studios and programming packagers.⁵²⁹

139. We first review changes in the market for the distribution of video programming, including changes in the level of competition in that market between July 1998 and June 1999. In our discussion of competition for the delivery 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

⁵²² Monica Hogan, *Municipal Overbuild Hits 2nd Ohio Town*, Multichannel News, Mar. 8, 1999, at 24. This system is in addition to the municipal utility cable overbuild that has been operating in Wadsworth, Ohio, for two years. Linda Haugsted, *City Happy With Its System in Wadsworth*, Multichannel News, Mar. 8, 1999, at 24.

⁵²³ Joe Estrella, *Time Warner Cuts Rate to Fight Overbuild*, Multichannel News, Jul. 19, 1999, at 38.

⁵²⁴ Joe Estrella, *Texas Electrical Co-op Will Fight Charter*, Multichannel News, Dec. 14, 1998, at 40.

⁵²⁵ *Id.*

⁵²⁶ Linda Haugsted, *Alameda Voters OK Municipal System*, Multichannel News, Nov. 30, 1998, at 77.

⁵²⁷ Mike Farrell, *Little Rock Ready to Roll on Cable*, Multichannel News, Jan. 4, 1999, at 3.

⁵²⁸ *1994 Report*, 9 FCC Rcd at 7541 ¶210; *1995 Report*, 11 FCC Rcd at 2123-24 ¶132; *1996 Report*, 12 FCC Rcd at 4419 ¶118; *1997 Report*, 13 FCC Rcd at 1121 ¶156; and *1998 Report*, 13 FCC Rcd at 24362 ¶125.

⁵²⁹ *Id.*

programming by MVPDs, and examine the effects that changes in concentration among MVPDs at the regional and national levels have had on this market.

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

140. The market for the delivery of video programming to households continues to be highly concentrated and characterized by substantial barriers to entry.⁵³⁰ While competitive alternatives to an incumbent “wireline” MVPD, i.e., a cable or OVS operator, are developing and attracting an increasing proportion of MVPD subscribers, most consumers have limited choice among video programming distributors. Generally, homes are passed by one wireline MVPD and a “wireless” MVPD, i.e., DBS is likely to be the only available alternative.⁵³¹ For example, of the 33,000 cable community units nationwide, 157 have been certified by the Commission as having effective competition as a result of consumers having a choice of more than one wireline MVPD.⁵³² In the Competitive Responses section of this report, we describe the competitive response of both the incumbent and the new entrant in several of these communities. Incumbent operators are most likely to respond to wireline competition by reducing their monthly charge for cable programming services and equipment, by offering additional channels, or by offering Internet and other telecommunications services.⁵³³

141. As of June 1999, Ameritech was the largest overbuilder, offering video service to 98 cable communities.⁵³⁴ Questions remain regarding the long term viability of some of these overbuilds.⁵³⁵ Overbuilding often requires “deep pockets” to withstand competitive responses from incumbents that lower prices and increase services.⁵³⁶ Some commenters also asserted that difficulties obtaining programming and steep discounts enjoyed by incumbent cable operators can hinder overbuilders’ ability to compete effectively in the video distribution market.⁵³⁷

142. Several wireless MVPDs, including MMDS, SMATV, and DBS, also deliver video programming to households and MDUs. Although DBS service is presumed to be technically available

⁵³⁰ *Id.*

⁵³¹ See ¶¶ 44-50 *supra*.

⁵³² The number of communities in which a cable operator faces wireline competition is determined by the number of communities that have been certified by the Commission as having effective competition on the basis of the head-to-head or LEC competition tests. If a cable operator facing competition from a wireline or LEC operator chooses not to file a petition for a determination of effective competition, the community served by the cable operator is not included in the count. In addition, if a petition has been filed and is pending, that community also is not included in the count.

⁵³³ See ¶¶ 215-248 *infra*.

⁵³⁴ See ¶ 123 *supra*.

⁵³⁵ *Id.*

⁵³⁶ Jim Barthold, *Customer Retention Tough for Pa. Overbuilder*, Cable World, August 18, 1999, at 12. Kent Gibbons, *Competition Is Costly In Columbus*, Multichannel News, November 23, 1998, at 16.

⁵³⁷ See ¶¶ 132-134 *supra*.

nationwide, DBS service may not be available to subscribers living in MDUs or in households that are not within the line of sight of a DBS signal. Moreover, DBS historically has not been able to deliver local television signals and may require higher overall payments during the first year of subscribership than cable.⁵³⁸ Thus, DBS may not be a viable alternative to wireline service for some households. Recently, SHVA was amended to authorize DBS providers to retransmit network signals into local markets.⁵³⁹ Other wireless MVPDs, such as SMATV, do not provide service throughout a local cable franchise area. MMDS often serves larger areas than SMATV, but generally offers fewer channels than cable systems.

143. NCTA asserts that cable's dominance of the market for distribution of video is not indicative of absence of competition in that market. NCTA states that DBS, cable's primary competitor, has the ability to distribute "a good substitute" for cable to consumers in any geographic market, thus constraining cable's ability to exercise market power.⁵⁴⁰

144. ***Recent Developments in the MDU Market.*** The MDU market is a significant segment of many local MVPD markets. MDUs comprise a wide variety of high-density residential complexes, including high and low-rise rental buildings, condominiums, and cooperatives.⁵⁴¹ As of December 1997, there were approximately 24.9 million year-round occupied "households" (or individual dwelling units) located in MDUs in the U.S., comprising approximately 25% of the total 99.5 million year-round housing units nationwide.⁵⁴² Historically, cable and SMATV operators were the primary providers of MVPD services to MDU subscribers.⁵⁴³ More recently, however, DBS has begun to supply programming to operators that serve MDUs and to MDU residents directly.⁵⁴⁴

145. SMATV operators, also known as private cable system operators, deliver an integrated package of services to MDUs using a variety of delivery technologies, including one or more microwave links.⁵⁴⁵ Traditional cable operators as well as the DBS providers (DirecTV and Echostar) also serve this

⁵³⁸ See ¶¶ 73-74 *supra*.

⁵³⁹ *Id.*

⁵⁴⁰ NCTA Comments at 8. See also *Use and Limitations of Structural Indicia of Market Power*, Economists Incorporated, August 1999, NCTA Comments, Attachment.

⁵⁴¹ Townhouses and mobile home communities, nursing homes, hospitals, and hotels may also represent consumer segments in some markets.

⁵⁴² U.S. Bureau of the Census, *American Housing Survey for the United States in 1997*, Tables 1A-1: "Introductory Characteristics – All Housing Units," October 1999. These figures exclude nursing homes, hospitals, and hotels that are not considered "housing units" by the Census Bureau.

⁵⁴³ See, e.g., MediaOne Comments at 12 (MediaOne faces competition from more than a dozen SMATV providers in Florida, more than 30 in Georgia, a dozen in California, approximately six in Illinois, and more than five in New England).

⁵⁴⁴ Jimmy Schaeffler, *DBS Leaders Set Strategies for Penetrating the MDU Market*, Private Cable & Wireless Cable, February 1999 ("*Schaeffler, February 1999*"), at 28. See also ¶ 98 *supra*.

⁵⁴⁵ OpTel Comments at 9.

market.⁵⁴⁶ Unlike traditional cable operators, private cable operators do not use public rights-of-way. Recently, several private cable system operators have joined with DBS operators to provide video programming to MDUs.⁵⁴⁷ Moreover, DBS operators have formed marketing-distribution alliances with several LECs aimed at MDUs and the household market.⁵⁴⁸ Such alliances permit the LECs to offer “one-stop-shopping” for telecommunications service including voice, data, and video.⁵⁴⁹

146. OpTel, Cable Plus, MidAtlantic Communications, and OnePoint Communications are the largest SMATV operators, specializing in serving high density local MDU markets.⁵⁵⁰ OpTel reports that it is the largest SMATV operator with 217,100 subscribers as of May 1998.⁵⁵¹ In addition to video, OpTel provides local telephone service to its subscribers in areas where it operates its own central office switch.⁵⁵² OpTel also provides long distance telephone service to its subscribers through a resale agreement with an interexchange carrier (“IXC”).⁵⁵³

147. Traditional franchised cable operators appear to be combining nonvideo communications services with their multichannel video offerings in order to compete more effectively, particularly in the MDU market. For example, Cox Communications, the fourth largest MSO, offers video programming and local telephone service to MDUs in many of its service areas.⁵⁵⁴ Some cable firms offer price discounts for MDU service, especially where they face a competing provider.⁵⁵⁵ In New York City, for example, Time Warner offers a significant discount to subscribers who live in MDUs where RCN is the competing provider.⁵⁵⁶ Like other competing providers, cable operators often seek to negotiate contracts with MDU owners that provide for some form of exclusivity.

⁵⁴⁶ *Id.* at 28. Although RCN, the largest OVS operator, has converted a number of its open video systems to traditional cable systems.

⁵⁴⁷ Jimmy Schaeffler, *DBS Providers Zero in on the Multihousing Market*, Private Cable & Wireless Cable, August 1999 (“*Schaeffler, August 1999*”), at 22.

⁵⁴⁸ *Id.*

⁵⁴⁹ CableDay, July 20, 1999, at 1.

⁵⁵⁰ OpTel Comments at 9; *Futuretrak International to Purchase DirectTV MDU License*, Comm. Daily, August 27, 1999, at 9.

⁵⁵¹ Private Cable & Wireless Cable, December 1998, at 18.

⁵⁵² OpTel Comments at 4.

⁵⁵³ *Id.*

⁵⁵⁴ *1998 Report*, 13 FCC Rcd at 24369 ¶141.

⁵⁵⁵ Price discounts to MDUs are permitted under the Commission’s rules. 47 C.F.F. § 76.984(c)(2); *see also* 47 U.S.C. § 543(d).

⁵⁵⁶ RCN Comments at 7.

148. Several LECs report that they are providing MVPD services to MDUs. During the year ending June 30, 1998, Ameritech reached agreements to provide cable service to 442 MDUs (with a total of 36,147 units) in communities in which it is a franchised cable operator.⁵⁵⁷ Of the 620 MDUs (with 62,542 units) in these communities that declined Ameritech New Media's cable service, 322 MDUs (with 40,912 units), or approximately one-half, have cited their exclusive agreements with incumbent cable operators as the reason for the denial.⁵⁵⁸

149. RCN uses a variety of technologies to serve MDUs, including cable, OVS, and SMATV systems. In the last year, RCN continued to expand in the MDU market in East Coast metropolitan areas. As of June 30, 1999, RCN had a total of 11,000 subscribers in the Boston metropolitan area.⁵⁵⁹ In the New York City metropolitan area, RCN had 50,000 subscribers.⁵⁶⁰ The majority of RCN's subscribers in the Boston and New York metropolitan areas live in MDUs.⁵⁶¹ Starpower, an RCN affiliate, has 3,000 subscribers in Washington, D.C., all of whom live in MDUs.⁵⁶² In all three areas, RCN offers a combination of video, high-speed Internet access, and local and long distance telephone services.⁵⁶³

150. DBS providers currently offer video programming service directly to approximately 75,000 MDU subscribers.⁵⁶⁴ DirecTV and EchoStar are expected to increase their combined share of the MDU market from less than 1% in 1999 to approximately 9% in 2007.⁵⁶⁵ In addition, DirecTV has agreements with some regional Bell operating companies ("RBOC"s), whereby the RBOCs market a co-branded DBS service to MDUs in their service areas.⁵⁶⁶ DBS operators are also combining their service with SMATV operators. For example, in a recent survey of private cable operators, 43% of the respondents indicated that they plan to add DBS into their SMATV-based operation.⁵⁶⁷

151. ***Competitive Issues in the MDU Market.*** As explained below, commenters raise a number of issues that they contend affect their ability to serve the MDU market. These include lack of access to inside wiring due to MDU owners objections for aesthetic, safety or practical reasons, exclusive and/or

⁵⁵⁷ 1998 Report, 13 FCC Rcd at 24369 ¶142.

⁵⁵⁸ *Id.*

⁵⁵⁹ RCN Comments at 5.

⁵⁶⁰ *Id.*

⁵⁶¹ *Id.* at 4.

⁵⁶² *Id.* at 7.

⁵⁶³ *Id.*

⁵⁶⁴ Schaeffler, August 1999, at 22.

⁵⁶⁵ Schaeffler, February 1999, at 28.

⁵⁶⁶ *Id.*

⁵⁶⁷ Cathy Stephens, *DBS vs. C-Band: A Business Model Comparison*, Private Cable & Wireless Cable, October 1999, at 18.

perpetual contracts between incumbents and MDU owners, the Commission's over-the-air-reception devices ("OTARD") rules which they contend should be expanded, and targeted discounts by incumbent cable operators to subscribers in MDUs when the operator faces competition.⁵⁶⁸

152. Several commenters suggest that exclusive or perpetual contracts between incumbent MVPDs and MDU owners hinder entry into the MDU market.⁵⁶⁹ According to commenters, exclusive 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 their tenants from having an opportunity to select among competing providers.⁵⁷⁰ Similarly, BellSouth argues that "access to premises" is usually not available to a new entrant in the MDU market due to perpetual contracts between the MDU owner and the incumbent MVPD.⁵⁷¹ According to the Independent Cable Telecommunications Association ("ICTA"), a significant portion of the approximately 25 million MDUs in the U.S. are currently covered by perpetual contracts with incumbent franchised cable operators.⁵⁷²

153. DirecTV argues that MDU residents have limited choices among MVPD providers because exclusive contracts between incumbents and property owners either discourage new entrants or make it impossible for them to enter the market.⁵⁷³ On the other hand, OpTel argues that the availability of an "exclusive right-of-entry" for any property is a significant factor in a new entrant's decision to enter the MDU market. OpTel suggests that exclusive agreements between the new entrant and MDU owners are usually awarded on the basis of competitive bidding and the result is usually beneficial for both the new entrant and the subscribers. However, according to OpTel, there are numerous pre-existing exclusive contracts between incumbent cable operators and MDU owners, which perpetuate the ownership of inside wiring by the incumbent and are therefore anticompetitive. OpTel asserts that large segments of the MDU market in Southern California, Phoenix, and Southern Florida, for example, have been foreclosed to new entrants by such agreements.⁵⁷⁴

154. Several commenters assert that the costs of duplicating inside wiring, as opposed to acquiring wiring from an existing provider who no longer has a legally enforceable right to remain on the MDU premises (using the Commission's inside wiring rules), can be costly and discourages potential new entrants.⁵⁷⁵ Ameritech asserts that incumbent MVPDs have threatened MDU owners with litigation over the

⁵⁶⁸ Ameritech Comments at 13-15; BellSouth Comments at 19; DirecTV Comments at 7-8; RCN Comments at 15-17; WCA Comments at 18; CCC Reply Comments at 24.

⁵⁶⁹ *Id.*

⁵⁷⁰ DirecTV Comments at 7; CCC Reply Comments at 26.

⁵⁷¹ BellSouth Comments at 19.

⁵⁷² Facsimile from ICTA, October 13, 1999, at 2.

⁵⁷³ DirecTV Comments at 7.

⁵⁷⁴ OpTel Comments at 6.

⁵⁷⁵ WCA Comments at 17; CCC Reply Comments at 15.

ownership of inside wiring in cases where the later provided access to competing MVPDs.⁵⁷⁶ RCN states that it faced “lockouts” in numerous MDUs based on the incumbent’s assertion that it owns the inside wiring or that it has the right to exercise dominion over the inside wiring under an agreement with the owner. RCN also states that incumbents cite state mandatory access laws as a legal basis for remaining in an MDU and retaining control of wiring.⁵⁷⁷ Ameritech asserts that incumbent MVPDs have refused to remove lockboxes that prevent access to inside wiring owned by the MDU owner. According to Ameritech, MDU owners in such cases are reluctant to remove incumbent’s lockboxes for fear of litigation.⁵⁷⁸

155. On October 9, 1997, the Commission adopted a *Report and Order and Second Further Notice of Proposed Rulemaking* that amended its cable inside wiring rules to enhance competition in the video distribution market.⁵⁷⁹ In spite of the changes brought about by the rules, some commenters assert the inside wiring rules do not go far enough to promote competition in the MDU market.⁵⁸⁰ For example, WCA argues that the inside wiring rules do not give MDU owners sufficient certainty as to their rights upon termination of an incumbent cable operator’s service.⁵⁸¹ WCA further argues that the rules allow incumbent operators to remove all inside wiring when they leave a building, forcing the new entrant to “postwire” or rewire the premises. According to WCA, MDU owners prefer to avoid postwiring for aesthetic and safety reasons. WCA contends that the Commission should adopt a rule stating that, if the MDU owner or successor MVPD wishes to purchase the incumbent’s home run wiring, it should have the right to do so at a price equal to the depreciated book value of the wiring.⁵⁸² DirecTV suggests that the Commission should adopt rules that would require cable incumbents to allow alternative MVPDs to share cable-owned inside wiring in MDUs.⁵⁸³

156. MediaOne, on the other hand, argues that the inside wiring rules give SMATV operators an unfair advantage in MDU market by affording them access to wiring installed at the expense of the incumbent operator.⁵⁸⁴ Similarly, NCTA contends that the rules favor cable’s competitors because they allow SMATV operators to engage in “cream skimming” by entering only the lucrative MDU market, since, unlike many cable operators, SMATV operators do not have to serve entire communities and comply with

⁵⁷⁶ Ameritech Comments at 14.

⁵⁷⁷ RCN Comments at 16.

⁵⁷⁸ Ameritech Comments at 15.

⁵⁷⁹ *Telecommunications Services Inside Wiring, Customer Premises Equipment, Implementation of the Consumer Protection and Competition Act of 1992: Cable Home Wiring*, CS Docket No. 95-184 and MM Docket No. 92-260, Report and Order and Second Further Notice of Proposed Rulemaking (“*Inside Wiring Order*”), 13 FCC Rcd 3659 (1998).

⁵⁸⁰ RCN Comments at 16; CCC Reply Comments at 23.

⁵⁸¹ WCA Comments at 18; CCC Reply Comments at 24.

⁵⁸² WCA Comments at 19.

⁵⁸³ DirecTV Comments at 7.

⁵⁸⁴ MediaOne Comments at 15.

expensive franchise obligations.⁵⁸⁵ MediaOne further contends that due to a recent Commission decision, SMATV operators are now in a position to expand their service areas using common carrier video transport between service locations.⁵⁸⁶ According to MediaOne, this gives SMATV operators the benefits of a cable franchise without commensurate regulatory and franchise obligations.⁵⁸⁷

157. Some commenters assert that the Commission's OTARD rules should be expanded to cover common areas for MDU residents.⁵⁸⁸ The OTARD rules, adopted on August 6, 1996, generally prohibit governmental and nongovernmental restrictions on household installation of antennas one meter or less in diameter. On November 20, 1998, the Commission extended the OTARD rules to allow renters to install antennas within their 'exclusive use' areas, i.e., apartments, homes, gardens, patios, terraces, and balconies. The rules, however, do not extend to installation of antennas on common property or on property to which a viewer does not have a right of access.⁵⁸⁹ SBCA states that while the existing OTARD rules have contributed to creating a more competitive environment if the satellite industry is to offer choice to consumers in MDUs, then all MDU residents should have access to satellite programming.⁵⁹⁰ Similarly, DirecTV states that while the Commission's OTARD rules have encouraged some MDU owners and landlords to use a single common dish for reception to prevent "dish clutter," the rule should to be extended to renters and owners who do not have exclusive use of areas suitable for satellite reception.⁵⁹¹

158. OpTel argues that as a result of the Commission's new rules regarding bulk rates, incumbent operators are better able to leverage their advantages when a new entrant seeks to serve an MDU or group of MDUs in a franchised area. Specifically, OpTel asserts that an incumbent can now respond to the threat of competition by offering targeted discounts only to those subscribers that have a competitive alternative, while maintaining higher prices for the balance of their subscribers.⁵⁹²

⁵⁸⁵ NCTA Comments at 30.

⁵⁸⁶ MediaOne Comments at 14 citing *Entertainment Connections, Inc.*, Memorandum Opinion and Order, 13 FCC Rcd 14277 (1998). See also *City of Chicago v. FCC*, ___ F.3d ___ (7th Cir. 1999), 1999 WL 1103446.

⁵⁸⁷ *Id.*

⁵⁸⁸ SBCA Comments at 25; DirecTV Comments at 8.

⁵⁸⁹ *Restrictions on Over-the-Air Reception Devices: Television Broadcast, Multichannel Multipoint Distribution and Direct Broadcast Satellite Services*, CS Docket No. 96-83, Second Report and Order, 13 FCC Rcd 23874 (1998); see also *Restrictions on Over-the-Air Reception Devices: Television Broadcast, Multichannel Multipoint Distribution and Direct Broadcast Satellite Services*, CS Docket No. 96-83, Order on Reconsideration, FCC 99-360 (rel. November 24, 1999).

⁵⁹⁰ SBCA Comments at 26.

⁵⁹¹ DirecTV Comments at 8.

⁵⁹² OpTel Comments at 5. *Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996*, CS Docket No. 96-85, Report and Order, 14 FCC Rcd at 5317 ¶ 41. See also Robert D. Primosch, *FCC's Uniform Rates Ruling Puts the Pressure on PCOs*, Private Cable & Wireless Cable, June 1999, at 25.

159. Many of the concerns discussed above were addressed in the *Report and Order and Second Further Notice of Proposed Rulemaking* on the inside wiring rules.⁵⁹³ The Second Further Notice also sought comment on several issues including: (a) whether there are circumstances where the Commission should adopt restrictions on exclusive contracts in order to further promote competition in the MDU market; (b) whether the Commission should preempt state and local mandatory access laws in order to broaden the applicability of the Commission's inside wiring rules enforceable; (c) whether the Commission should exempt small MVPDs from signal leakage reporting requirements; (d) whether the Commission should extend its rules regarding customer access to cable inside wiring before termination of service to cover all MVPDs in the same manner that they apply to cable operators; and (e) whether to allow MDU owners to require that incumbent MVPDs share their wiring with competitive MVPDs. The Commission is currently reviewing the comments filed in this proceeding.

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

160. As explained in the *1998 Report*, the buyers of video programming are MVPDs including cable operators and other video service providers, and the sellers are primarily non-broadcast programming networks.⁵⁹⁴ This market tends to be regional or national since programmers seek to develop networks much broader than local cable franchise areas. Also, some programming services are intended for a national audience (e.g., CNN, USA) and others for regional audiences (e.g., NY1, New England Sports Channel).

a. Regional Market

161. 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 smaller holdings scattered across the country. This clustering is accomplished through purchases and sales of cable systems, or by system "swapping" among MSOs.

162. **Competitive Issues Related to Clustering.** Clustering of cable systems can create greater economies of scale and size. Accordingly, it can enable cable operators to offer a wider variety of broadband services at lower prices to customers in geographic areas that are larger than single cable franchise areas. Clustering can thus make cable operators more effective competitors to LECs whose local service areas are usually much larger than a single cable franchise area. The General Accounting Office, in its report on the changing status of competition to cable television, also found that ownership ties and clustering strategies may provide cost savings and possible competitive advantages.⁵⁹⁵

163. Several commenters assert harmful effects of clustering and regional concentration on program distribution.⁵⁹⁶ BellSouth argues that since a programming service cannot be successful without access to a critical mass of subscribers, programmers are becoming more reliant on large, well clustered

⁵⁹³ See *Inside Wiring Order*.

⁵⁹⁴ *1998 Report*, 13 FCC Rcd at 24362 ¶ 125.

⁵⁹⁵ United States General Accounting Office Report to the Subcommittee on Antitrust, Business Rights, and Competition, Committee on the Judiciary, U.S. Senate; *Telecommunications: The Changing Status of Competition to Cable Television*; GAO/RCED-99-158, July, 1999.

⁵⁹⁶ BellSouth Comments at 6; CCC Reply Comments at 10; Ameritech Comments at 7; DirecTV Comments at 11.

MSOs that effectively control distribution on a national and regional scale.⁵⁹⁷ Commenters also argue that clustering can facilitate evasion of the Commission's program access rules. Specifically, it is likely that cable systems in a large cluster will be linked through a fiber optic network enabling operators to offer telecommunications services as well as a cost-efficient means of delivering programming to its systems. However, if MSOs have an ownership interest in programming, fiber optic networks may give them an added incentive to "migrate" programming from satellite delivery to terrestrial (fiber optic) delivery because only satellite delivered programming is subject to the program access rules. Therefore, a vertically integrated incumbent may be able to prevent competitors from gaining access to terrestrially delivered programming.⁵⁹⁸ For example, Ameritech argues that AT&T is creating a large cluster in the Chicago area, a market that Ameritech also seeks to serve.⁵⁹⁹ Ameritech contends that clustering may lead to an increase in terrestrial delivery of programming by AT&T, which could thereby result in the circumvention of the Commission's program access rules to the detriment of Ameritech.⁶⁰⁰

164. ***Recent Developments in Clustering.*** Since the previous report, cable MSOs have continued to undertake or announce system mergers, acquisitions, divestitures, swaps, and joint ventures with the objective of creating regional clusters of contiguous cable systems. Most of these transactions resulted in the expansion of existing regional clusters of cable systems in the southern, eastern, and western United States.⁶⁰¹ Analysts report that in 1999, MSOs sought to create clusters of regional cable systems similar to the telephone systems owned by the regional Bell operating companies in order to better enable cable operators to provide local telephone and Internet services.⁶⁰² Each of the top ten MSOs have significant clusters in major metropolitan areas. AT&T, for example, has clusters in Chicago, San Francisco/Oakland/San Jose, and Dallas, serving nearly 80% of the cable subscribers in these areas.⁶⁰³ Similarly, Comcast's major clusters are in the Washington/Baltimore, Philadelphia, and Detroit areas. Charter is building major clusters in the Los Angeles area and in the Pacific Northwest.⁶⁰⁴ Clustering is not limited to large systems. Some small systems are also acquiring systems with the intent of increasing the size of their existing clusters. Recent transactions include Millennium acquisition of Horizon Cable's 43,000 subscribers in Michigan and Summit Communication's approximately 43,000 subscribers in Baltimore and Seattle.⁶⁰⁵

⁵⁹⁷ *Id.*

⁵⁹⁸ BellSouth Comments at 15-16; CCC Reply Comments at 15.

⁵⁹⁹ Ameritech Comments at 7.

⁶⁰⁰ *Id.* at 9.

⁶⁰¹ Paul Kagan Assocs., Inc., *Swapping is the Name; Clustering's the Game*, Cable TV Investor, July 26, 1999, at 4-6.

⁶⁰² David Liberman, *AT&T Bargains for Cable System Swaps*, USA Today, June 13, 1999, at 1-B.

⁶⁰³ *Mass Media*, Comm. Daily, April 4, 1999, at 8.

⁶⁰⁴ David Liberman, *Cable Deals Follow Trend Towards Regionalization*, USA Today, May 27, 1999, at B1.

⁶⁰⁵ See App C, Tbl C-5. See also Cableday, Wednesday, May 5, 1999, at 1.

165. Between July 1998 and June 1999, there were a total of 129 transactions having an aggregate value of approximately \$72 billion and involving 19.7 million subscribers, all intended to increase the size of existing cable clusters.⁶⁰⁶ Although the total number of clusters declined from 117 at the end of 1997 to 103 at the end of 1998, the total number of subscribers associated with these clusters increased from 34.3 million to 40.4 million between the end of 1997 and 1998.⁶⁰⁷ In the largest cluster size category (over 500,000 subscribers), the number of clusters increased by 31.3% between 1997 and 1998, and the number of subscribers in these clusters increased by 64.7%.

166. **System Mergers and Acquisitions.** In April 1999, AT&T announced its intention to acquire MediaOne and its nearly five million subscribers for approximately \$69 billion. Century, previously the tenth largest MSO, was acquired by Adelphia for \$5.2 billion in March 1999. In July 1999, Vulcan Ventures, owned by Microsoft co-founder Paul Allen, announced its intention to acquire Charter (which had previously acquired Falcon), one of the largest cable MSOs. In April 1999, Comcast acquired majority interest in Jones Intercable. In May 1999, Cox announced its intention to acquire TCA and its 1.8 million subscribers for \$3.6 billion. In November 1999, Comcast agreed to buy Lenfest Communications from AT&T for \$6.71 billion in stock and debt. These transactions appear designed to better position the cable operators to deliver Internet and telephony services.⁶⁰⁸

167. **System Trades.** As discussed in the *1998 Report*, system-for-system "swaps" or trades enable MSOs to increase their regional clusters while minimizing financial outlays and avoiding capital gains taxes.⁶⁰⁹ Since our last report, many of the largest proposed swaps, as measured by number of subscribers, involved AT&T and Time Warner, the two largest MSOs. For example, AT&T recently swapped approximately 656,000 of its subscribers in Illinois, New Jersey, Oregon, Pennsylvania, and Wyoming for Time Warner's approximately 618,000 subscribers in Florida, Hawaii, Maine, New York, Ohio, Texas and Wisconsin.⁶¹⁰ In a swap announced in February 1999, Time Warner will receive 350,000 of MediaOne's subscribers in Ohio, California, and Maine in exchange for 310,000 subscribers in Massachusetts, New Hampshire, and Georgia.⁶¹¹

b. National Market

168. Cable operators may have incentives to coordinate their decisions in the market for the purchase of programming on a national level. Concentration of ownership among buyers in this market is one indicator that coordinated behavior among buyers will be successful. Economic theory suggests that the

⁶⁰⁶ Paul Kagan Assocs., Inc., *Cable System Sales Summary*, The Cable TV Investor, August 10, 1998, at 10; March 3, 1999, at 8; and September 10, 1999, at 12.

⁶⁰⁷ See App. C, Tbl. C-2.

⁶⁰⁸ *The Consolidation Craze*, Broadcast & Cable, July 14, 1999, at 40.

⁶⁰⁹ *1997 Report*, 13 FCC Rcd at 1118-19 ¶ 147.

⁶¹⁰ Paul Kagan Assocs., Inc., *Cable TV News and Data Points*, Cable Investor, June 1999, at 16.

⁶¹¹ See App. C, Tbl. C-5.

level of competition is positively correlated to the number of firms in the relevant market, given there are no barriers to enter the market.⁶¹²

169. **Competitive Issues.** Several commenters raise concerns about the anticompetitive effects of horizontal concentration of ownership on the purchase of programming.⁶¹³ Ameritech, for example, cites an economic study by Dertouzos and Wildman that indicates that the largest MSOs are able to obtain programming on more favorable terms than smaller MSOs, including new entrants.⁶¹⁴ Dertouzos and Wildman report that an MSO's large size, rather than its efficiency, explains the lower programming price paid by an incumbent cable operator compared to a new entrant. According to Dertouzos and Wildman, the ability to obtain programming at a lower cost gives the incumbents the ability to thwart entry by competitors.⁶¹⁵

170. Another concern is that excessive concentration of ownership may create "media gatekeepers" that could potentially bar entry of new programmers and reduce the number of media voices available to consumers.⁶¹⁶ In the 1992 Cable Act, Congress recognized the potential harm of excessive concentration of ownership on new programming, and directed the Commission to place limits on the concentration of ownership of cable systems at the national level. At the same time, Congress also recognized the potential benefits to subscribers resulting from the size and scale of MSOs. In 1998, the Commission adopted a horizontal ownership limit prohibiting any person from having an attributable interest in cable systems that in aggregate reach more than 30% of cable homes passed nationwide.⁶¹⁷ The 30% rule was intended to strike a balance between: (a) limiting the possibility that large cable MSOs might exercise excessive market power in the purchase of video programming; and (b) ensuring that cable operators could

⁶¹² Concentration alone is not sufficient to determine whether a market is noncompetitive. If it is easy for new participants to enter the market, for example, highly concentrated markets may behave competitively. See F.M. Scherer, *Industrial Market Structure and Economic Performance*, Rand McNally College Publishing Company, 1980, at 56.

⁶¹³ Ameritech Comments at 10; Bell Atlantic Comment at 12-13; CCC Reply Comments at 17-23; EchoStar Comments at 6.

⁶¹⁴ James N. Dertouzos and Steven S. Wildman, *Programming Access and Effective Competition in Cable Television*, Comments of Ameritech, *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992: Horizontal Ownership Limits*, Memorandum and Order on Reconsideration and Further Notice of Proposed Rulemaking, MM Docket 92-264, 13 FCC Rcd 14462 (1997) at Attachment 2.

⁶¹⁵ *Id.*

⁶¹⁶ *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992: Horizontal Ownership Limits*, MM Docket No. 92-264, Third Report and Order ("Horizontal Ownership Limits Order"), FCC 99-289 (rel. October 20, 1999) at n. 21.

⁶¹⁷ The Commission's horizontal ownership rules and the statutes were challenged in two different forums. In *Daniels Cablevision, Inc. v. United States*, the U.S. District Court for the District of Columbia held that Section 613(f)(1)(a) violates the First Amendment. Time Warner challenged the horizontal ownership rules in the District Court of Columbia. In August 1996, the District of Columbia Circuit consolidated the appeals of Daniels with Time Warner. See *Daniels Cablevision, Inc. v. United States*, 835 F.Supp. 1, 10 (D.D.C. 1993), *aff'd in part*; *Time Warner Entertainment Co. L.P. v. FCC*, 93 F.3d 957 (D.C.Cir. 1996). The appeal is currently pending.

continue to benefit from economies of size in order to encourage investment in new video programming delivery technology and the deployment of other advanced technologies and services.⁶¹⁸

171. Recognizing changes in the MVPD market, the Commission amended its horizontal ownership and related attribution rules in October 1999.⁶¹⁹ Under the newly adopted rules, calculation of the horizontal limit is based on MVPD subscribers served rather than homes passed. The actual number of subscribers served is a more accurate indicator of market power in the programming market than the number of homes passed. In addition, the calculation of ownership limits in the new rules is based on all MVPD subscribers and not solely on the number of cable subscribers. For example, although DBS providers pass almost every home in the country, DBS provides service to approximately 12% of all MVPD subscribers.⁶²⁰ This change reflects the changing nature of the national market for the purchase of video programming and, specifically, the growing impact of DBS on the market.

172. The Commission's new horizontal ownership rules prohibit any person from having an attributable interest in cable systems that in the aggregate reach more than 30% of MVPD subscribers (as opposed to cable homes passed) in the U.S.⁶²¹ The 30% limit on ownership balances the interests of new cable networks and cable operators. Although a lower ownership limit would likely reduce the chances of collusion among cable operators and thereby increase a new cable network's chances of carriage, an ownership limit of 30% permits cable operators to cluster systems in order to gain efficiencies related to economies of scale and scope in administration, deployment of new technologies and services, and extension into previously unserved areas.⁶²²

173. ***Concentration in the National Market for the Purchase of Video Programming.*** Over the past year, non-cable MVPDs continued to increase their presence in the program purchasing market. For example, DirecTV and Echostar, have become two of the top ten MVPDs nationwide.⁶²³ Nevertheless, cable operators continue to be the primary distributors of multichannel video programming, controlling 82.45% of total MVPD subscribers.⁶²⁴

174. The top four purchasers of video programming for distribution at the household or MDU market are AT&T (with a share of 20.5%), Time Warner (with a share of 15.95%), DirecTV (with a share of

⁶¹⁸ *Horizontal Ownership Limits Order* at ¶ 11.

⁶¹⁹ *Id.* at ¶ 5.

⁶²⁰ *Id.* at ¶ 29.

⁶²¹ *Id.* at ¶ 53.

⁶²² *Id.*

⁶²³ DirecTV is the fourth largest MVPD with 5.3 million subscribers; Echostar is the eighth largest MVPD with 2.6 million subscribers.

⁶²⁴ Subscriber totals for the cable companies are as of June 1999, and as reported in Paul Kagan Assocs., Inc., *Top Cable Operators as of June 1999*, Cable TV Investor, August 20, 1999, at 10-12. Some of these totals may be different from the totals submitted by companies to the Commission. For example, AT&T, in their *ex parte* filing in Docket CS No. 99-251, November 24, 1999, reports a subscriber count of approximately 21 million which would result in approximately 26% share of total MVPD subscribers. See also App. C, Tbl. C-1.

9.23%), and Comcast (with a share of 8.26%).⁶²⁵ The share of subscribers of these top four MVPDs, has declined slightly over the past year. In 1998, the four MVPDs with the largest subscribership served 54.6% of all MVPD subscribers.⁶²⁶ In 1999, the top four MVPDs served 53.93% of all MVPD subscribers nationwide.⁶²⁷ However, the share of the top ten MVPDs increased by more than 3% between 1998 and 1999.

175. To assess the potential for market power resulting from concentration in the market for the purchase of programming, we employ the Herfindahl-Hirschman Index (“HHI”).⁶²⁸ Since MVPDs purchase programming on a “per-subscriber” basis, the reported MVPD shares can be appropriately translated into HHI figures.⁶²⁹ The nationwide purchaser MVPD HHI is 923 – considered “unconcentrated” under the Merger Guidelines.⁶³⁰ The HHI is 173 points lower than the HHI of 1096 reported last year.⁶³¹

176. The HHI and the market shares reported above are based on number of subscribers served by MSOs as of June 30, 1999. Our data on concentration in the market for the purchase of programming do not include transactions that have been announced but have not yet been consummated. For example, MediaOne and AT&T are treated as separate entities because their merger has not been consummated.

177. To summarize, our examination of national MVPD concentration currently reveals that the market for the purchase of video programming by MSOs is less concentrated than the market for distribution of video programming to consumers which remains highly concentrated. In the regional and national markets for the purchase of video programming, a number of large MSOs are consolidating their subscriber

⁶²⁵ These market shares calculated using available industry data and do not attempt to reference the Commission’s revised attribution rules. *See Implementation of the Cable Television Consumer Protection and Competition Act of 1992, Implementation of Cable Act reform Provisions of the Telecommunications Act of 1996: Review of the Commission’s Attribution Rules*, Report and Order, CS Docket Nos. 98-82, 96-85 (“*Attribution Order*”), FCC 99-288 (rel. October 20, 1999).

⁶²⁶ *1998 Report*, 13 FCC Rcd at 24422, App. C, Table C-3.

⁶²⁷ *See* App. C, Tbl. C-3.

⁶²⁸ *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 sellers in the market. It is a measure of concentration that takes account of the entire firm size distribution. The HHI varies with the number of firms in the market and degree of inequality among firm size. Generally, HHI increases when there are fewer and unequal sized firms in the market. If the firms in the market are similar in size or if there is only one firm, the HHI has no advantage over other measures of concentration such as four-firm or eight-firm concentration ratio. Thus, in local video distribution markets where the incumbent cable operator is the only MVPD, the HHI is of limited use. However, in the market for the purchase of video programming, where both cable and non-cable MVPDs compete, the HHI is sensitive to differences in firm size.

⁶²⁹ That is, the total license fee paid for a program is based, in part, on the total number of subscribers served by the MVPD. As the subscribership increases, so does the total license fee paid by the MVPD.

⁶³⁰ The United States Department of Justice and Federal Trade Commission consider markets with HHI below 1000 as “unconcentrated;” markets with an HHI between 1000 and 1800 as “moderately concentrated;” and markets with HHI above 1800 as “highly concentrated.” *See 1998 Report*, 13 FCC Rcd at 24363 n. 562.

⁶³¹ *1998 Report*, 13 FCC Rcd at 24422, App. C. Tbl C-3.

base, although the share of the two largest MSOs (AT&T and Time Warner) has declined during the past year.⁶³² For example, AT&T's share of MVPD subscribers fell from 26.5% in 1998 to 20.5% in 1999. Time Warner's share changed slightly from 16% in 1998 to 15.95% in 1999. This explains for the drop in the HHI between 1998 and 1999.⁶³³ Because programmers have an incentive to minimize transaction costs by obtaining carriage on a single large MSO, thereby gaining access to the large number of subscribers which are needed for viability, larger MSOs have significant bargaining power, especially vis-a-vis startup programming networks that need to reach a certain critical level of subscribership quickly to maintain their viability. However, it appears that currently no single MSO or pair of MSOs currently control a large enough share of cable subscribers to effectively block entry by a new programmer.

B. Vertical Integration and Other Programming Issues

1. Status of Vertical Integration

178. This section updates the status of vertically integrated video programming networks in the MVPD market. Vertical integration occurs where a video programming distributor has an ownership interest in a video programming supplier or vice versa.⁶³⁴ These vertical relationships may have beneficial effects,⁶³⁵ or may deter competitive entry in the video marketplace, and/or limit the diversity of programming.⁶³⁶

179. The total number of programming networks has grown and cable operators continue to consolidate and develop new ownership interests, however the proportion of vertically integrated channels continues to decline. In 1999 there were 283 satellite delivered national programming networks, up from 245 in 1998, an increase of 16%. Of the 283 networks, 104 networks, representing 37%, were vertically integrated with a cable MSO.⁶³⁷ This is a decrease from 1998 when 95 of 245, or 39% of national

⁶³² See App. C, Tbl. C-3.

⁶³³ By squaring market shares, the HHI weighs the values for large companies more heavily than small companies. Also, the HHI declines with rising equality among any given number of companies. See F.M. Scherer, *Industrial Market Structure and Economic Performance*, Rand McNally College Publishing Company, 1980, at 58.

⁶³⁴ The data set forth in this section generally identify vertical ownership relationships by reference to the ownership attribution standards associated with the Commission's horizontal and vertical (channel occupancy) rules in effect when the *Notice* was released. On October 8, 1999, the Commission revised its horizontal ownership rules in two separate Report and Orders: See *Horizontal Ownership Limits Order supra* at fn. 616 and *Attribution Order supra* at fn. 625. See also *1998 Report*, 13 FCC Rcd 24284 at ¶ 164.

⁶³⁵ 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).

⁶³⁶ See *1995 Report*, 11 FCC Rcd at 2135 ¶ 158; *Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992 Vertical Ownership Limits*, MM Docket 92-264, Memorandum Opinion and Order on Reconsideration of the Second Report and Order ("*Vertical Ownership Limits*"), 10 FCC Rcd 7364, 7365 (1995) ¶ 4.

⁶³⁷ In last year's *Report*, we began the practice, continued in this *Report*, of counting 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, fn. 661.

programming networks were vertically integrated, and 1997 when 40% (68 of 104) programming networks were vertically integrated.

180. One or more of the top six cable MSOs holds ownership interests in each of the 104 vertically integrated services.⁶³⁸ AT&T, the nation's largest MSO, holds ownership interests in 50 programming networks, 18% of all programming networks, through its subsidiary, Liberty Media.⁶³⁹ In 1998, prior to its merger with AT&T, TCI was the largest cable MSO and held ownership interests in 67 of the 242 national programming networks or 28%.⁶⁴⁰ Time Warner has an ownership interest in 24, or 8% of all programming networks. Cablevision, through its programming subsidiary, Rainbow Media, owns 11 programming networks, 4% of all national networks. Cox Communications has interests in 23, or 8% of national programming networks. MediaOne, with ownership interests in 12 national programming networks, controls 4% of national programming. Comcast, with its six networks and control over two national networks through Jones Intercable, has ownership interests in 3% of all national programming networks.⁶⁴¹

181. 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.⁶⁴² In 1998, nine of the top 15 were vertically integrated, whereas seven of the top 15 services were vertically integrated in 1997, and eight of top 15 were vertically integrated with a cable system in 1996. However, it appears that a significant amount of MVPD programming is controlled by approximately twelve companies, including cable MSOs, broadcasters, and other media entities.⁶⁴³ For example, of the top 50 programming networks in terms of subscribership, 46 are owned by one or more of these 12 companies.⁶⁴⁴ According to Comcast, a

⁶³⁸ The top six MSO's are Time Warner Cable, AT&T Broadband & Internet Services, MediaOne, Comcast Cable Communications, Cox Communications, and Cablevision Systems. *See* App. D, Tbl. D-5.

⁶³⁹ Although Liberty Media is a subsidiary of AT&T, AT&T has raised the issue of the extent of control it has over Liberty owned programming. *See, e.g., ex parte* filing in CS Docket No. 99-251, November 24, 1999.

⁶⁴⁰ *1998 Report*, 13 FCC Rcd at 24378 ¶ 163.

⁶⁴¹ In April 1999, Glenn Jones, founder of Jones International, sold controlling interest in cable MSO, Jones Intercable, to Comcast Cable Communications. *See Comcast Announces Filing of Registration Statement Relating to Partial Exchange Offer for Jones Intercable, Inc.* (press release) August 23, 1999. *See also* Frank Witsil, *Augusta, Ga.-Based Cable Firm to Adopt Comcast Name*, *The Augusta Chronicle*, September 29, 1999.

⁶⁴² App. D, Table D-6.

⁶⁴³ The 12 companies are: ABC/Disney, General Electric, CBS, News Corp, Time Warner, Viacom, Discovery, Rainbow Media, Liberty Media, USA Networks, E.W. Scripps, and Comcast. As noted above (paragraph 104), CBS and Viacom have announced a proposed merger of their two companies. *See* Tom Kerver, *Who's Who: The Program Consolidators*, *Cablevision*, June 29, 1998, at 28.

⁶⁴⁴ 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 12 companies listed in footnote 643 *supra* have any ownership interest in WGN or The Weather Channel. *See* Paul Kagan Assocs., *Network Census: September 30*, *Cable Program Investor*, Dec. 17, 1999, at 8.

vertically integrated cable MSO, consolidation in the cable industry is not unexpected, parallels consolidation in other telecommunications industry segments, and is “a competitive response to challenges from DBS, LECs, and others.”⁶⁴⁵ In addition, currently eight out of the top 15 video programming networks ranked by prime time ratings are vertically integrated with a cable MSO.⁶⁴⁶

182. This year we found 72 programming services that have been planned but are not yet operational, an 11% increase from the *1998 Report's* count of 65 planned services. The planned services count includes some overlap from previous years because it can often takes several years from the announcement of a new programming network to launch the network and begin service. In the *1997 Report*, there were 77 planned services and the *1996 Report* reported 63 prospective services.⁶⁴⁷

2. Other Programming Issues

183. The *Notice*, in addition to requesting information on video programming networks, requested comment on a number of related programming issues. The Commission sought comment on whether there are specific types of programming (e.g., movie, sports, or news channels) that an MVPD needs to provide in order to be successful. We also requested information on electronic programming guides offered by cable operators and other MVPDs. We sought comment regarding local and regional programming networks, Public Educational and Government (PEG) access channels, and a la carte offerings. We also sought comment on the effect of increased programming costs on rates, and the effectiveness of the Commission's program access rules.

184. **Sports Programming.** Several commenters maintain that sports programming, in particular, regional sports programming, is important to the success of MVPDs. Of the 56 regional cable channels counted in this year's report, 20, or 36%, are sports channels.⁶⁴⁸ Regional sports networks last year generated \$264 million in advertising revenue and \$525 million in affiliate licensing fees.⁶⁴⁹ It is in this context that commenters assert that sports programming providers, both vertically integrated and non-vertically integrated, act as gatekeepers that allow access to sports programming to some MVPDs but not to others.⁶⁵⁰ For example, a vertically integrated, regional sports channel may shift from satellite to terrestrial distribution and no longer be subject to program access requirements.⁶⁵¹ Where the regional sports channel

⁶⁴⁵ Comcast Comments at 26.

⁶⁴⁶ App. D, Table D-7.

⁶⁴⁷ Compare Table D-4 *infra* with *1998 Report*, 13 FCC Rcd at 24442, Appendix D, Table D-4, *1997 Report*, 13 FCC Rcd at 1222-25 App. F, Tbls. F-3, F-4, and *1996 Report*, 12 FCC Rcd at 4517-20 App. F, Tbls. 3-4.

⁶⁴⁸ See App D, Table D-3.

⁶⁴⁹ R. Thomas Umstead, *Murdoch Gets His Fix*, Cablevision, April 26, 1999, at 50.

⁶⁵⁰ RCN Comments at 19; Seren Reply Comments at 9; CoreComm Reply Comments at 20; and CCC Reply Comments at 8 and 15.

⁶⁵¹ See ¶¶ 201-204 *infra* for a more detailed description of program access.

is non-vertically integrated, a cable MSO may enter into an exclusive contract with the program provider in order to deprive its rivals of the programming.⁶⁵²

185. DirecTV asserts that the current program access rules allow the “unfair practice” of “eliminating DBS access to previously satellite-delivered regional sports programming.”⁶⁵³ Similarly, RCN, a competitive MVPD, alleges that Cablevision, a vertically integrated MSO, shifted its sports programming to terrestrial distribution in order to thwart RCN’s efforts “to establish a competitive foothold in the New York City market.”⁶⁵⁴ Hiawatha Broadband Communications calls for a blanket prohibition of exclusivity agreements for regional sports programming.⁶⁵⁵

186. Consolidation in the programming industry is also said to have a significant impact on the cost of providing sports programming. Regional sports programming is dominated by Fox Sports Net, which owns 14 of the 20 existing regional sports networks. Last year, Fox acquired AT&T subsidiary Liberty Media’s half of the Fox Liberty Sports networks in exchange for 51.8 million shares of News Corp stock. Fox Sports Net, owned by News Corp., and ESPN, owned by Disney, reach 68 million and 76 million television households, respectively. In addition, both News Corp. and Disney have interests in sports teams and sports venues. Commenters assert that, with such vast sports assets, these programmers have no incentive to constrain their costs and simply pass on increased costs to MVPDs. For instance, Cablevision reports that Fox’s Sports Net affiliates fear a double-digit price increase if Fox obtains a programming agreement with a major sports property such as major league baseball.⁶⁵⁶ Commenters also note that because most sports programming affiliate fees are based on subscriber volume, only well clustered, large MSOs can take full advantage of discounts on programming.⁶⁵⁷

187. **News Programming.** Although sports programming dominates regional networks, news is also a growing regional offering. Of the 56 regional programming networks, 15, or 27%, are regional news networks. Unlike sports programming, regional and local news networks have a more diverse ownership and serve smaller markets. A number of regional news networks are vertically integrated with cable MSOs. Cablevision Systems, the sixth 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, New York. Time Warner, MediaOne, AT&T, and Adelphia, all among the top ten cable MSOs, each own or have ownership interests in regional or local news programming networks, often in partnership with newspaper or publishing companies.⁶⁵⁸ Nine regional or local news networks are non-vertically integrated with a cable system operator.

⁶⁵² Seren Reply Comments at 9.

⁶⁵³ DirecTV Comments at 10.

⁶⁵⁴ RCN Comments at 19.

⁶⁵⁵ Hiawatha Comments at 1. *See also* CCC Reply Comments at 13.

⁶⁵⁶ R. Thomas Umstead, *Murdoch Gets His Fix*, Cablevision, April 26, 1999, at 50.

⁶⁵⁷ R. Thomas Umstead, *Consolidation Blues*, Cablevision, June 28, 1999, at 39.

⁶⁵⁸ Deborah D. McAdams, *Cable News Nets Go Small*, Broadcasting & Cable, September 27, 1999, at 42.

188. News networks are moving into smaller markets with several serving a single city, versus a region or group of cities, and providing information such as school closings and coverage of high school sports.⁶⁵⁹ Regional and local news programming networks are considered viable in these smaller markets because they can offer lower advertising rates than local broadcast stations. New England Cable News (“NECN”), one of the oldest cable news networks, reports a 139% increase in national advertising sales between 1997 and 1998. National advertising now comprises 35% of NECN’s total advertising sales, compared to no national advertising when the network started in 1992.⁶⁶⁰

189. The use of digital production technology has enabled “hyper-local news” to thrive in the MVPD market. Digital production facilities enable journalists in the field to do their own camera work, resulting in a smaller payroll than a comparable analog news production facility.⁶⁶¹ Consequently, 24-hour local news operations can be viable in smaller markets.

190. **PEG Programming.** Public, educational, and government (“PEG”) channel set-asides are often required on cable systems by local franchising authorities.⁶⁶² Approximately 16% of all cable systems actively carry PEG programming.⁶⁶³ 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.

191. The Alliance for Community Media, which advocates on behalf of PEG access centers nationwide, has raised concerns regarding the use of PEG channels by non-access entities and argues that PEG channel capacity should remain reserved for use by people in communities.⁶⁶⁴ The Alliance also contends that the Portland, Oregon, broadband access case⁶⁶⁵ and the arrival of digital television will have an impact on PEG channels as “crunches on channel capacity” puts pressure on municipalities to turn over channel capacity to non-PEG uses.⁶⁶⁶

⁶⁵⁹ *Id.* at 48.

⁶⁶⁰ *Id.* at 42.

⁶⁶¹ *Id.* at 44.

⁶⁶² Communications Act, § 611, 47 U.S.C. § 531.

⁶⁶³ 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). *See also* www.alliancecm.org.

⁶⁶⁴ Alliance for Community Media, *Forum Network Tries Access Channel Grab* (press release), March 16, 1999.

⁶⁶⁵ Cable operator and Internet service provider (ISP) AT&T challenged a Portland, Oregon, city ordinance and county resolution requiring it to allow competing ISPs to access its cable modem platform. The District Court held that: (1) the open access requirement was not preempted by Telecommunications Act; did not violate AT&T’s First Amendment free speech rights; did not violate Commerce Clause; state or federal Contract Clauses; and did not breach franchise agreements. *AT&T Corp v. City of Portland*, 43 F.Supp.2d 1146, 16 Communications Reg. (P&F) 138 (D. Or. June 3, 1999) (NO. CV 99-65 PA).

⁶⁶⁶ *Cable Capacity, U.S. Preemption, Key Issues for Access Channels*, Communications Daily, July 9, 1999.

192. **Electronic Programming Guides.** In the *Notice*, we requested information on electronic programming guides ("EPGs") offered by cable operators and other MVPDs. EPGs generally display text information in a grid format indicating which television programs are currently showing. This allows viewers to navigate the channels offered by MVPDs. EPGs are considered an important technology because of their potential to influence channel selection and facilitate current and future interactive television functions such as e-commerce or Internet access. Gemstar International Group is the major provider of EPGs to VCR, television, and set-top box manufacturers.⁶⁶⁷ Microsoft, which uses Gemstar technology in its WebTV set-top boxes, and America On-Line, which is planning an interactive television service with DBS provider DirecTV, are also licensees of Gemstar. In October 1999, Gemstar accepted an offer to merge with its former rival, TV Guide.⁶⁶⁸ TV Guide had developed and marketed its own EPG and had filed a patent infringement suit against Gemstar.⁶⁶⁹ The merger is expected to be completed during the second quarter of 2000. Competitors to Gemstar include Replay Networks and TiVo. Both companies have separately developed video recorders that use a computer hard drive, instead of video cassette tape, to record television programs. These hard drive recorders provide their own on-screen program guides.⁶⁷⁰

193. In the *1998 Report*, many commenters expressed concern that vertically integrated programmers could steer viewers to their own programming through the design of their EPGs.⁶⁷¹ The Commission, when implementing Section 629 of the Communications Act in the *Navigation Devices Order*,⁶⁷² stated that it is "committed to encouraging the development of the market for electronic programming guide services as part of our broader goal of promoting consumer choice," but noted that the limited record available made it impossible to "adequately address the extent of any obligation of MVPDs to make EPG services available pursuant to Section 629 or otherwise."⁶⁷³ The Commission stated that it would continue to monitor developments with respect to the availability of electronic program guides in order to determine whether any future action is appropriate.⁶⁷⁴

194. **Programming Costs.** The Commission's most recent (May 1999) report on cable industry prices ("*1998 Price Report*") asked cable operators to describe factors which led to changes in their rates.

⁶⁶⁷ See *1998 Report*, 13 FCC Rcd at 24385 ¶¶ 182-3 for a full description of Gemstar's technology.

⁶⁶⁸ *Son of Merger of Equals: Gemstar, TV Guide Make Love, Not War*, CableFAX Daily, October 5.

⁶⁶⁹ Gemstar International Group has also filed patent infringement suits against AT&T, Scientific-Atlanta, General Instrument and Pioneer Electronics. See Robert La Franco, *Technology: The Patent Terrorist*, Forbes, May 17, 1999, (Forbes Archives) at <http://www.forbes.com/forbes/99/0517/6310055a.htm>.

⁶⁷⁰ Evan Ramstad, *Digital Guides Vie in TV Power Play -- Which Ones Will Become Television's Gatekeepers?*, The Wall Street Journal, May 27, 1999, at B1. See also ¶ 119 *supra*.

⁶⁷¹ See Ameritech Comments, *1998 Report*, at 44.

⁶⁷² *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Report and Order ("*Navigation Devices Order*"), 13 FCC Rcd 14775 (1998). *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Order on Reconsideration, 14 FCC Rcd 7596 (1999).

⁶⁷³ *Navigation Devices Order*, 13 FCC Rcd at 14820 ¶116.

⁶⁷⁴ *Id.*

Competitive and noncompetitive cable operators attributed much of their rate increases to increases in programming costs. According to the *1998 Price Report*, increases in existing programming costs accounted for an average of 33% of cable operators' rate increases.⁶⁷⁵ Within the programming segment of costs, competitive cable operators attributed 63% of their programming cost increases to general entertainment programming, 4% to children's programming, 9% to news programming, and 24% to sports programming for the year ending July 1, 1998. Non-competitive operators attributed 69% of their programming cost increases to general entertainment programming, 3% to children's programming, 6% to news, and 22% to sports.⁶⁷⁶ MediaOne states that "sports programming currently comprise over 19 percent of all its programming costs" and contends that "rising programming costs...among all programming categories [has resulted in] upward pressure of MediaOne's prices, and shrinking profit margins for the company."⁶⁷⁷ According to NCTA estimates, cable systems spent 7.4 billion on programming in 1998, an increase of 16% over the \$6.4 billion spent in 1997. This increase is consistent with annual increases since 1994.⁶⁷⁸

195. Commenters assert that programming discounts benefit large MSOs more than newer and smaller MVPDs. ACA contends that smaller and rural cable systems have higher per-subscriber operating costs than larger systems because smaller and rural systems generally do not qualify for programming discounts due to the low number of subscribers that they serve.⁶⁷⁹ Similarly, Ameritech asserts that "cable incumbents are able to negotiate substantial discounts for popular programming – discounts which, because of their size, are unavailable to new entrants."⁶⁸⁰ In addition, Ameritech cites a study that found "industry discounts ranging from 14 to 91 percent and a mean discount of 45 percent for cable programming networks."⁶⁸¹ NCTA, however, warns that requiring programmers to charge uniform prices would either artificially suppress programmers' revenues and expenditures, or artificially raise the price paid for programming by more efficient operators, and increase rates for cable subscribers.⁶⁸²

196. Finally, the emergence of digital technology has affected programming costs. According to Cablevision, it costs a programmer between \$150 million and \$200 million to launch an analog channel but

⁶⁷⁵ Inflation, channel additions, system upgrades and miscellaneous or "other" costs were also said to account for a large portion of rate increases. See *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment*, MM Docket No. 92-266, Report on Cable Industry Prices ("*1998 Price Report*"), 14 FCC Rcd 8331, 8345-6 (1999) ¶¶ 33-34.

⁶⁷⁶ *1998 Price Report*, 14 FCC Rcd at 8346 ¶ 34.

⁶⁷⁷ MediaOne Comments at 18. See also *MediaOne Results Send Slowdown Signal*, Multichannel News, Nov. 9, 1998, at 18.

⁶⁷⁸ *Cable Systems' Programming Expenditures: 1986 – 1998*, Cable Television Developments, Summer 1999, at 7. NCTA estimates are based on Paul Kagan Associates, Inc. and US Copyright Office data.

⁶⁷⁹ ACA Comments at 4.

⁶⁸⁰ Ameritech Comments at 10.

⁶⁸¹ Ameritech Comments at 11. See also Ameritech Comments, *Vertical Ownership Limits*, MM Docket No. 92-264, Aug. 14, 1998, at Attachment 2.

⁶⁸² NCTA Reply Comments at 11-12.

only \$2 million to \$5 million to augment that existing analog channel with a digital channel. In addition, digital channels may attract advertisers at a lower audience threshold than analog channels (5 million versus 20 million viewers) because of more desirable demographics.⁶⁸³ Many established programming networks base new digital tiers on an existing channel.⁶⁸⁴ For example, Discovery offers, in a digital format, Discovery Civilization, Discovery Home & Leisure, Discovery Kids, Discovery Science, Discovery Wings, Discovery Health and Discovery People.

197. *A La Carte/Unbundling of Cable Programming Services Tiers.* In the *Notice*, we sought information on the extent to which MVPDs offer or plan to offer consumers programming choices on an "a la carte" or individual channel basis rather than in tiers of channels. Currently, the majority of programming networks are offered in tiers. Premium channels, such as HBO and Showtime, and some sporting events, such as boxing, are offered on an a la carte basis.⁶⁸⁵

198. Unbundling of programming tiers is thought to provide more subscriber choice and greater competition among program services.⁶⁸⁶ However, operators maintain that tiering enables delivery of MVPD programming at the lowest per channel costs. In addition, because most cable subscribers do not have addressable⁶⁸⁷ set-top boxes, a la carte delivery is not always technically feasible. It is also thought that subscribers are more likely to view new programming channels that are bundled on a tier with established programming.

199. Hiawatha states that it has invested in a technology that allows it to provide programming on an a la carte basis. It asserts, however, that the pricing and channel placement requirements of some cable programmers have prevented Hiawatha from implementing its a la carte service offerings.⁶⁸⁸ For example, an affiliate agreement between Outdoor Life Network and Speedvision required that the two sports channels be offered as part of a package that included at least two other programming services, and could not be offered on an a la carte basis.⁶⁸⁹

200. Some industry watchers cite the sunset of cable rate regulation and the growth in digital channels as incentives for cable operators to be more flexible in their packaging of programming

⁶⁸³ Digital subscribers are almost universally higher-end income families. See *Attack of the Monster Programmers*, Cablevision, June 29, 1998, at 31. See also Price Colman and Deborah McAdams, *The Digital Jungle* (editorial), Broadcasting & Cable, August 23, 1999, at 22.

⁶⁸⁴ *Id.*

⁶⁸⁵ For a discussion of tiering, generally, see *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992: Buy through Prohibition*, MM Docket No. 92-262, Report and Order, 8 FCC Rcd 2274 (1993).

⁶⁸⁶ See statement of Senator Inouye, S.Rep. No. 102, 102d Cong., 2d Sess. 77 (1992).

⁶⁸⁷ Addressability is the ability of a cable operator to control electronically, from a remote centralized location, the selection of services received by individual customers.

⁶⁸⁸ Hiawatha Comments at 10.

⁶⁸⁹ Price Colman, *Programmers Act Against Action Plus*, Broadcasting & Cable, December 14, 1998, at 50.

channels.⁶⁹⁰ Comcast, for instance, offers its subscribers a low-priced basic service tier and several small cable programming tiers, at different prices. It contends that by offering these mini tiers, subscribers have the ability to tailor their programming purchases to their individual tastes.⁶⁹¹

201. ***Regulatory Issues Related to Program Access, Carriage Rules*** The Commission has established rules prohibiting unfair and discriminatory practices by vertically integrated cable operators.⁶⁹² The program access rules seek to promote competition and diversity in the multichannel video programming market.⁶⁹³ Most commenters focused specifically on concerns related to the migration of channels from satellite delivery to terrestrial delivery and on price discrimination.

202. As previously noted, several commenters assert that terrestrial migration weakens the intent of program access rules and threatens the development of a competitive MVPD market.⁶⁹⁴ In 1998, the Commission found that the record did not support claims of anticompetitive impact from programming being moved from satellite to terrestrial delivery. However, the Commission noted that terrestrial migration may in the future impact the ability of alternative MVPDs to compete in the video marketplace.⁶⁹⁵

203. Several commenters advocate extending the program access rules to non-vertically integrated programmers.⁶⁹⁶ Alternative MVPDs indicate that certain programming networks not owned by cable operators (e.g. fX, MSNBC) are not available to them. The CCC contends that exclusive agreements between unaffiliated programmers and incumbent cable operators is a significant barrier to competition.⁶⁹⁷ Similarly, EchoStar asserts that cable operators are able to use their “overwhelming” buying power in the programming market with both vertically integrated programmers, as well as independent programmers at the expense of noncable MVPDs.⁶⁹⁸ The Commission, in its *1998 Program Access Order*, declined to

⁶⁹⁰ Price Colman and John M. Higgins, *Icy After the Sunset*, *Broadcasting & Cable*, March 22 1999, at 38.

⁶⁹¹ Comcast Reply Comments at 20. *See also* Comcast, *ex parte* submission, Dec. 3, 1999.

⁶⁹² The Commission's program access rules are set forth at 47 C.F.R. §§ 76.1000-76.1003, and the program carriage rules are set forth at 47 C.F.R. §§ 76.1300-76.1302. *See also* 47 U.S.C. § 536(a)(2); 47 U.S.C. § 548.

⁶⁹³ *See* Section 19 of the 1992 Cable Act, Development of Competition and Diversity in Video Programming Distribution. *See also* 47 U.S.C. § 548. DBS providers are exempt from the program access rules and are allowed to enter into exclusive programming arrangements.

⁶⁹⁴ SBCA Comments at 25; DirecTV Comments at 2-3, 10-11.

⁶⁹⁵ *See Petition for Rulemaking of Ameritech New Media, Inc. Regarding Development of Competition and Diversity in Video Programming Distribution and Carriage, In the Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992*, CS Docket No. 97-248, RM No. 9097, Report and Order (“1998 Program Access Order”), 13 FCC Rcd 15822, 15856-7 (1998) ¶ 71.

⁶⁹⁶ WCA Comments at 5; Echostar Comments at 6; CCC Reply Comments at 4.

⁶⁹⁷ CCC Comments at 2.

⁶⁹⁸ EchoStar Comments at 6.

extend the program access rules to non-vertically integrated programming networks, finding that the record did not support such action.⁶⁹⁹

204. Non-vertically integrated programmers respond that they actively seek widespread distribution and audience share and thus have no incentive to disadvantage competing distribution outlets.⁷⁰⁰ Independent programmers, like Viacom, argue that exclusivity agreements allow them to gain distribution, recognition, and the subscriber base necessary to successfully launch a start-up network and therefore, actually add to program diversity.⁷⁰¹ NCTA disputes that an anticompetitive effect results from the unavailability of terrestrially delivered or non-vertically integrated networks, and asserts that product differentiation and exclusivity are legitimate, pro-competitive strategies that increases choices and the amount of programming available to consumers.⁷⁰²

205. In a related issue, BellSouth asserts that consolidation and clustering can have a “chilling effect on the willingness of programmers to sell their product to cable’s competitors.”⁷⁰³ NCTA maintains, however, that consolidation and clustering result in cost savings and efficiencies that promote competition.⁷⁰⁴

C. Technical Advances

206. In this section, we update the information provided in the *1998 Report* regarding technical developments, and discuss recent activities relating to the commercial availability of the equipment used to access video programming and other services.⁷⁰⁵ Cable operators and other MVPDs continue to develop and deploy advanced technologies, especially digital compression techniques. These technologies allow MVPDs to deliver additional video options and other services (e.g., data access, telephony) to their customers. To access these wide ranging services, consumers use “navigation devices.” Navigation devices are television set-top boxes, converter boxes, interactive communications equipment, and other equipment that a consumer uses to access video programming and other services offered by MVPDs. The most common navigation devices in use are television set-top boxes that access cable television, and which typically include a descrambler and tuner.

1. Deployment of Digital Technology

⁶⁹⁹ *1998 Program Access Order*, 13 FCC Rcd at 15856-7 ¶ 71.

⁷⁰⁰ Disney Reply Comments at 4.

⁷⁰¹ Viacom Reply Comments at 7.

⁷⁰² NCTA Reply Comments at 10-11.

⁷⁰³ BellSouth Comments at 8.

⁷⁰⁴ NCTA Reply Comments at 11-12.

⁷⁰⁵ *1998 Report*, 13 FCC Rcd at 24391-4 ¶195-206.

207. Cable operators continue to deploy digital compression and upgrade their facilities to increase the number of video services that they can offer.⁷⁰⁶ The manner in which cable operators deploy this capability differs among companies.⁷⁰⁷ For example, AT&T's Headend In the Sky ("HITS") service and Time Warner's AthenaTV offer a mix of advertising supported and subscription supported networks on their digital tiers. Alternatively, Comcast and MediaOne offer premium channels, multiplexed movie channels and pay-per-view programming on their digital services.⁷⁰⁸ As cable operators deploy digital compression technology and advanced hybrid fiber-coaxial cable architecture, programming networks, such as A&E, Nickelodeon, ESPN, BET, and MTV, are developing more channels of specialized programming.⁷⁰⁹ Digital compression also permits cable operators to provide other digital and data services, including cable modem and Internet services, IP telephony, other data delivery, and general cable telephony.

208. In addition, MVPDs are beginning to distribute programming in high definition television ("HDTV"). Programming networks, including HBO, Showtime and Discovery, are now producing programming in HDTV or are converting existing programming to this format.⁷¹⁰ In particular, DirecTV now offers the HBO HDTV channel to consumers on a national basis⁷¹¹ and an HDTV channel featuring pay-per-view movies and selected special events including concerts and sports.⁷¹²

209. Last year, we reported that, in addition to deploying digital compression to provide increased video channel choices, the cable industry was redoubling its efforts to take advantage of its large bandwidth capacities from its coaxial and optical fiber cable in order to compete with other MVPDs.⁷¹³ Cable operators are continuing to upgrade their systems for bandwidth expansion through other technical methods, including the electronic component upgrading of existing amplifiers which may allow for an incremental increase in bandwidth capacity of the coaxial cable plant (e.g., 750 MHz to 860 MHz) without physically relocating or installing new amplifiers on the existing coaxial cable plant.⁷¹⁴ This added bandwidth capacity permits the cable operator to offer more programming channels and other services, including Internet access.

2. Navigation Devices

⁷⁰⁶ *Id.* at 24391-2 ¶ 196-198.

⁷⁰⁷ Price Colman, *The Digital Jungle*, Broadcasting & Cable, August 23, 1999, at 22, 26; Deborah D. McAdams, *Dancing into Digital*, Broadcasting & Cable, August 23, 1999, at 30.

⁷⁰⁸ *Id.* See also Comcast Reply Comments at 20.

⁷⁰⁹ Price Colman, *The Digital Jungle*, Broadcasting & Cable, August 23, 1999, at 23; NCTA Comments at 33.

⁷¹⁰ NCTA Comments at 33.

⁷¹¹ DirecTV Comments at 18.

⁷¹² DirecTV, *DIRECTV Launches Second HDTV Channel Beginning Nov. 1* (press release), Oct. 28, 1999.

⁷¹³ *1998 Report*, 13 FCC Rcd at 24392 ¶ 198

⁷¹⁴ See, e.g., <http://www.qrf.com/upgrart1.htm>.

210. Section 629 of the Communications Act directed the Commission to adopt rules to ensure the commercial availability of navigation devices in order to expand the opportunities for consumers to purchase this equipment from sources other than their service providers.⁷¹⁵ Since the *1998 Report*, the Commission amended its rules implementing Section 629⁷¹⁶ on reconsideration.⁷¹⁷ The revised rules are intended to further the goal of providing competition in the telecommunications marketplace by facilitating consumers ownership of the equipment used to access video programming and other services. Specifically, with regard to analog devices, the Commission deferred application of the rules requiring a separate security module for analog-only devices.⁷¹⁸ We explained that January 1, 2005, was chosen as a reasonable period of time for an MVPD to transition its inventory to unbundled equipment. The Commission also stated that it expects that the standards developed through the OpenCable process will enable manufacturers and designers unaffiliated with MVPDs to build devices that can be sold through national retail distribution. In addition, we clarified that the components of the security module should be closely related to the security functions of the navigation device, and enhance, rather than assume, a function of the host device.

211. Cable industry groups continue to develop standards consistent with the rules and goals of Section 629 through the OpenCable project of Cable Television Laboratories, Inc. (“CableLabs”). In particular, the rules require that MVPDs must separate security functions from non-security functions by July 1, 2000, and make modular security components available by that date.⁷¹⁹ As part of the standards setting process, the cable industry is required to file semi-annual status reports with the Commission to assure that there is steady progress in meeting the schedule submitted by CableLabs for the development of specifications for a digital security module and for a digital security module interface. The reports also are intended to apprise the Commission of CableLabs’ efforts to foster the retail availability of navigation devices. The first two reports were submitted on January 7, 1999, and July 7, 1999, respectively, and indicate that CableLabs continues to meet the milestones set forth in the proposed schedule.⁷²⁰ In accordance with that schedule, specifications for the digital security module were developed by December 1998. In addition, specifications for the digital security module interface were approved by the Society of Cable Television Engineers (“SCTE”) in December 1998.⁷²¹ In the first status report, the cable industry reported that the Motion Picture Association of America (“MPAA”) and others believed that an encryption scheme should be adopted to provide protection of digital content across the interface between the module

⁷¹⁵ 47 U.S.C. § 549. Section 629 was added to the Communications Act by Section 304 of the 1996 Act.

⁷¹⁶ *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Report and Order, 13 FCC Rcd 14775 (1998).

⁷¹⁷ *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Order on Reconsideration, 14 FCC Rcd 7596 (1999).

⁷¹⁸ 47 C.F.R. § 76.1204.

⁷¹⁹ *Id.*

⁷²⁰ *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Status Report, filed January 7, 1999 (“January Status Report”); *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, Status Report, filed July 7, 1999 (“July Status Report”).

⁷²¹ July Status Report at 7.

and host device.⁷²² Since that report, a specification has been advanced within an SCTE working group.⁷²³ Furthermore, a preliminary digital security module prototype was completed on June 15, 1999, meeting the only milestone established for the January through June 1999 period.⁷²⁴

3. Cable Modems

212. Depending on the services offered by the cable operator, a cable modem may allow subscribers high-speed access to data services, including the Internet, Internet Protocol (“IP”) telephony, video conferencing and telecommuting.⁷²⁵ Cable modem deployment increased substantially in 1999.⁷²⁶ Initially, cable operators deployed proprietary network equipment and cable modems that subscribers leased from their cable operator.⁷²⁷ To allow for the distribution of cable modems through retail sale, CableLabs initiated the CableLabs Certified Cable Modem Project, formerly known as Data Over Cable Service Interface Specification or DOCSIS. The project defines interface requirements for high-speed cable modems. It also provides a method for certifying that cable modems are in compliance with the DOCSIS specification.⁷²⁸ Cable modem equipment suppliers whose cable modems receive DOCSIS certification are entitled to denote that this equipment is CableLabs Certified when it is sold at retail outlets. CableLabs Certified cable modems will communicate with any DOCSIS qualified headend systems. CableLabs anticipates wide-scale deployment of DOCSIS certified headend equipment.⁷²⁹

213. As of September 1999, CableLabs had certified 11 modems as DOCSIS compliant for retail sale.⁷³⁰ CableLabs also has qualified three suppliers of high-speed cable data headend equipment.⁷³¹ Cable operators have brought cable modem service to over 100 television markets. Cable operators and consumer electronics retailers have been conducting retail pilot programs selling DOCSIS certified modems in several

⁷²² January Status Report at 2.

⁷²³ July Status Report at 8.

⁷²⁴ July Status Report at 8.

⁷²⁵ *1998 Report*, 13 FCC Rcd at 24939-4 ¶204; http://www.cablemodem.com/DOCSIS_Security.html

⁷²⁶ See ¶¶ 56-60 *supra*.

⁷²⁷ Kinetic Strategies Inc., <http://www.cabledatcomnews.com/cm/cmic2.html>.

⁷²⁸ http://www.cablelabs.com/start_here/cablelabs_initiatives.html.

⁷²⁹ CableLabs, *CableLabs Certifies Terayon Modem, Re-certifies Thomson and Toshiba* (press release), Sept. 2, 1999, http://www.cablelabs.com/PR/PR_DOCSIS_090299.html.

⁷³⁰ Modem suppliers that have received CableLabs Certified status include: 3Com, Arris Interactive, Askey Computer Corp., Cisco Systems, General Instrument, Philips Electronics, Samsung Information Systems of America, Sony corp., Thomson Consumer Electronics, Terayon Communications Systems, Toshiba, Best Data, and Com21. CableLabs, *CableLabs Certifies Best Data and Com21 Modems, Re-certifies GI and RCA Modems, Re-Qualifies Cisco CMTS* (press release), Dec. 9, 1999, http://www.cablelabs.com/PR/pr_cw11_120999.html.

⁷³¹ These three companies are Arris Interactive, Cisco Systems, and Motorola. CableLabs, *CableLabs Qualifies Arris and Motorola High-Speed Data Headend Equipments* (press release), July 15, 1999, http://www.cablelabs.com/PR/PR_DOCSIS_071599.html.

regions.⁷³² However, widespread retail availability of DOCSIS certified modems is not expected until well into 2000 for several reasons, including prices that are considered too high at about \$300 and unresolved issues relating to arrangements between retailers and cable operators.⁷³³

214. Another CableLabs project is PacketCable, which is intended to identify, qualify and support Internet-based voice and video products over cable systems.⁷³⁴ Approximately 240 cable, telecommunications, and computer industry companies are participating in PacketCable.⁷³⁵ This project is developing interoperable interface specifications for delivering advanced, real-time multimedia services over two-way cable plant. PacketCable will use IP technology to enable a wide range of services, such as IP telephony, multimedia conferencing, interactive gaming, and general multimedia application. CableLabs is in the process of conducting interoperability testing of equipment and protocols based on PacketCable specification.⁷³⁶

IV. COMPETITIVE RESPONSES

215. During 1999, the Bureau examined a number of cases where the incumbent cable operator faced “head-to-head” competition from one of a variety of new entrants including municipalities, LECs, public utilities, and DBS operators. In communities where head-to-head competition is present, the incumbent cable operator has responded to competitive entry in a variety of ways, such as by lowering prices, providing additional channels at the same monthly rate, improving customer service, or adding new services including high speed Internet and telephone services.

216. In section A below, we describe the initial response of both incumbents and new entrants in several local franchise areas where the incumbent cable operator is facing competition from a new entrant.⁷³⁷ The samples of competitive responses discussed below include localities in which an incumbent cable operator was found by the Commission to face effective competition from a new entrant, as well as communities for which a petition for effective competition has been filed and is pending before the Commission. These case studies examine situations in which an incumbent is faced with effective

⁷³² MediaOne has started limited rollout of DOCSIS modems with Circuit City in New England, Richmond, Atlanta. AT&T and CompUSA ran a pilot in Spokane. *MediaOne Sets DOCSIS Retail Strategy*, Multichannel News, June 14, 1999; Karen Brown, *Retail Rollout*, Cable World, Oct. 25, 1999, at 12. Cablevision recently announced a retail modem program through its owned electronics stores, The Wiz. The program will begin in Norwalk, Connecticut, and then expand to the rest of Connecticut and Long Island. *Mass Media*, Comm. Daily, Nov. 2, 1999.

⁷³³ Kinetic Strategies Inc., <http://www.cabledatacomnews.com/cm/cmic16.html>. See also Jim Barthold, *No Retail Modems for Holiday Sales*, Cable World, Sept. 27, 1999, at 1.

⁷³⁴ <http://www.packetcable.com>.

⁷³⁵ CableLabs, *CableLabs Hosts PacketCable Interoperability Testing* (press release), July 8, 1999, http://www.cablelabs.com/PR/PR_PC_Interop_070899.html.

⁷³⁶ *Id.*

⁷³⁷ Ameritech Comments at 1-2 and Exhibit 1. In its comments, Ameritech, which operates as a new entrant in 90 communities in Michigan, Illinois, and Ohio, describes several similar examples of competitive response by the incumbent cable operator.

competition from a single new entrant, and do not necessarily reflect potential competitive responses if an area was to have more than one effective competitor. In section B we summarize our preliminary findings based on the case studies and examine the nature and the duration of competitive responses of both incumbents and new entrants.

A. New Case Studies

1. Royal Oak, Huntington Woods, and Clawson, Michigan

217. Ameritech New Media (“Ameritech”), a subsidiary of a LEC, was awarded a cable franchise in June 1997 by the City of Royal Oaks, Michigan. In July 1997, Ameritech was granted cable franchises by the Cities of Huntington Woods and Clawson, Michigan.⁷³⁸ Ameritech began offering video services to Royal Oaks in December 1997, to Clawson in March 1998, and to Huntington Woods in April 1998.

218. TCI Cablevision of Oakland County, Michigan, is the incumbent cable operator in all three communities. According to TCI, Ameritech has reached penetration levels of 44%, 32% and 40.5% in Royal Oaks, Huntington Woods, and Clawson, respectively. TCI’s penetration rates are 51.8% in Royal Oaks, 66.1% in Huntington Woods, and 52.9% in Clawson.⁷³⁹

219. As of June 1998, Ameritech charged \$9.95 per month for its basic tier which included primarily local broadcast channels. Its “Americast” expanded basic tier had 60 channels and was priced at \$29.95 per month. To promote its Americast services, Ameritech offered a variety of promotional packages to its new subscribers, including free cable service for two months, \$120 worth of grocery coupons, a free premium movie channel, and free installation.⁷⁴⁰

220. In June 1997, prior to Ameritech’s entry into the Royal Oaks, Huntington, and Clawson areas, TCI had added new channels to its “cable plus” package and raised monthly rates by 13%. When Ameritech was granted its franchises, TCI reduced its monthly rates for the cable plus package from \$32.20 per month to \$28.95 per month, a 10% reduction, and moved the Disney Channel from a premium service to a basic service tier (Ameritech also offered the Disney Channel as a basic service). In addition, TCI offered its subscribers in the Royal Oaks area discount coupons worth \$10.⁷⁴¹ TCI offered a free converter box and remotes in Royal Oaks and Clawson.⁷⁴² TCI also offered “money back guarantees” on premium programming in all three communities.⁷⁴³

⁷³⁸ *Petition of Tribune-United Cable of Oakland County d/b/a TCI Cablevision of Oakland County, Inc., For Determination of Effective Competition*, CSR 5334-E (“*TCI Petition*”), December 2, 1998, at Attachments D and E.

⁷³⁹ *Id.*

⁷⁴⁰ *TCI Petition* at Exhibit F.

⁷⁴¹ Catherine Kavanaugh, *Changing Channels*, Daily Tribune, September 23, 1997, at 1A.

⁷⁴² *TCI Petition* at 13 and Exhibit B.

⁷⁴³ *Id.*

221. TCI petitioned the Commission for a determination of effective competition in the Royal Oaks, Huntington Woods, and Clawson areas. The Cable Services Bureau granted the petition on February 5, 1999. The Bureau found that Ameritech had overbuilt TCI's systems in each of the affected communities and was competing for subscribers with TCI in those areas. Also, Ameritech's extensive marketing efforts and press coverage of its construction ensure that potential subscribers were aware of the availability of Ameritech's service. The Bureau also noted that as a result of competition in the above communities, cable rates were lower, new channels were added, and equipment was provided free of charge.⁷⁴⁴

2. West Point, Georgia

222. On June 1, 1998, ITC Globe, Inc., d/b/a/ KnoLog (KnoLog), began providing its cable service in the City of West Point, Georgia. KnoLog is affiliated with the incumbent LEC, Interstate/Valley Telephone Company. Its 750 MHz system is capable of providing video and high-speed Internet services.

223. Initially, KnoLog offered a 17 channel basic service package for \$8.75 per month, and a 59 channel extended basic package for \$25.95 per month.⁷⁴⁵ Its extended basic package included a number of channels that were unavailable on the incumbent cable operator's channel line up. KnoLog later reduced its extended basic rate to \$19.95 per month and added six additional channels. It also offered free installation and a "30-day money back guarantee" to its subscribers.

224. KnoLog also discounted its "bundled" Internet and cable services. Specifically, KnoLog charged \$29.95 per month to its cable customers for its "Olobahn" high-speed Internet access service, but charged its non-cable subscribers \$49.95 per month for the same service. KnoLog's subscribers could also opt for a consolidated bill for cable, telephone, and Internet services.

225. Marcus, the incumbent cable operator in West Point, responded to KnoLog's entry in a variety of ways. According to Marcus, it recently: (a) upgraded its 350 MHz system to a 750 MHz system; (b) added six new programming services to its expanded basic package and reduced the price for that package; (c) implemented an overall price reduction of up to 48% for its basic, extended basic, and premium packages; (d) ceased charging customers for its wire maintenance protection plan; and (e) implemented various marketing and advertising plans detailing its rates and service changes.⁷⁴⁶ As of August, 1998, 205 of Marcus' subscribers had switched to KnoLog. Marcus reported that KnoLog had a subscriber base of 214 compared to its own subscriber base of 1,200.⁷⁴⁷

226. Marcus petitioned the Commission for a determination of effective competition in West Point. The Bureau granted the petition on January 26, 1999. The Bureau found that KnoLog had overbuilt Marcus' system, and that potential subscribers were aware of the availability of KnoLog's service.⁷⁴⁸ Also,

⁷⁴⁴ *TCI Cablevision of Oakland County, Inc., Petition for Determination of Effective Competition*, Memorandum and Order, CSR 5334-E, 14 FCC Rcd 2345, 2348-49 ¶¶8-¶11.

⁷⁴⁵ *Petition of Marcus Cable Associates, LLC., for Determination of Effective Competition*, CSR 5297-E ("Marcus Petition"), August 31, 1998, at Exhibit F.

⁷⁴⁶ *Marcus Petition* at 11-12 and Exhibit M.

⁷⁴⁷ *Id.* at 8-9.

⁷⁴⁸ *Marcus Cable Associates, LLC., For Determination of Effective Competition*, CSR 5297-E, Memorandum Opinion and Order, 14 FCC Rcd 2078, 2082 ¶11.

potential subscribers were able to receive KnoLogys service for little or no additional investment and without encountering regulatory and technical difficulties. The Bureau also noted that cable rates were lower and additional services were being provided as a result of competition in West Point.

3. Somerville, Massachusetts

227. On December 16, 1997, the City of Somerville awarded a cable franchise to RCN-BecoCom, L.L.C. ("RCN"). Previously, RCN, a telecommunications company, was certified by the Commission to be an OVS operator in Somerville. RCN has been providing video and other services to Somerville residents since October 1997.⁷⁴⁹

228. Prior to providing cable services in Somerville, RCN launched a \$2.25 million advertising campaign that offered telephone, Internet, and cable services at a lower "bundled" rate than anywhere else in the country.⁷⁵⁰ In response to RCN's advertising campaign and impending entry, Time Warner launched its own advertising campaign, offering its subscribers a free subscription to *TV Guide*, an additional channel, and lower rates for its universal remote control.⁷⁵¹

229. RCN offered a standard service consisting of 75 channels for \$24.95 per month. Its standard service included channels such as the Disney Channel, The History Channel, and the Discovery Channel. The monthly charge for RCN's standard service was further discounted to \$19.97 per month for subscribers who also bought local telephone service from RCN.⁷⁵² RCN also offered unlimited high-speed Internet access for an additional \$19.95 per month. The monthly charge for Internet access was discounted to \$17.95 if subscribers also subscribed to RCN's cable or telephone services. Time Warner charged \$26.48 for its 56 channel "standard" service. RCN offered free standard installation whereas Time Warner charged \$30.64 for installation.⁷⁵³

230. In November 1997, Time Warner announced a 10% price increase for its standard cable services in 82 Massachusetts communities, but did not increase rates in Somerville. In June 1998, Time Warner reduced monthly charges for its basic and standard services in Somerville by \$0.19 and \$0.09 per month, respectively. As of June 1998, Time Warner was charging \$26.20 for its 56 channel standard service. Time Warner's standard service had 19 fewer channels than RCN's. Moreover, unlike RCN, Time Warner's standard service did not include Disney Channel, Discovery Channel and The History Channel. Time Warner charged \$9.50 a month for the Disney channel and \$.75 a month for the Discovery and The History channels.

⁷⁴⁹ *Petition of Time Warner Cable, Supplement to Petition for Special Relief*, CSR-5166-E ("Time Warner Petition"), August 19, 1998, at 2 and *Time Warner Entertainment Advance/Newhouse Partnership d/b/a Time Warner Cable, Petition for Determination of Effective Competition*, CSR 5166-E, Memorandum Opinion and Order ("Time Warner Order"), 14 FCC Rcd 2338, 2340-41 ¶4.

⁷⁵⁰ Kathleen Powers, *RCN Foments Cable Revolution*, Somerville Journal, July 3, 1997; *Time Warner Petition* at Exhibit B.

⁷⁵¹ *Time Warner Petition* at 6.

⁷⁵² *Id.* at Exhibit B.

⁷⁵³ *Id.*

231. After entry by RCN, Time Warner reduced rates for certain premium services. For example, prior to RCN's entry, Time Warner was charging \$12.55 for three channels of HBO. As of June 1998, Time Warner reduced its rate for the three channel HBO package to \$11.50, an 8% reduction. RCN charged \$11.95 for two channels of HBO.⁷⁵⁴ At the same time, Time Warner offered its subscribers more flexibility in selecting programming packages by allowing them to buy premium services without having to subscribe to its standard service. In early 1999, Time Warner announced that it would freeze its rates in Somerville during 1999.⁷⁵⁵

232. According to one report, as of March 1999, between 2,000 to 2,500 of the approximately 19,000 Time Warner subscribers in Somerville switched to RCN.⁷⁵⁶ A number of RCN's subscribers purchase "bundled" services, including Internet access and telephone service. Currently, Time Warner does not offer Internet or telephone service in Somerville. However, Time Warner is planning to swap its Somerville system with MediaOne, and the latter is expected to provide Somerville with Internet and telephone service in addition to cable services.⁷⁵⁷

233. Time Warner filed a petition requesting a finding of effective competition in the City of Somerville. The petition was granted on February 5, 1999, recognizing that potential subscribers were reasonably aware of the availability of RCN's services, and that subscribers in wired areas were able to receive RCN's cable service for only a minimal additional investment and without encountering regulatory or technical obstacles.⁷⁵⁸

4. Various Communities, Vermont

234. In May 1999, Adelpia Cable Communications ("Adelpia") filed petitions challenging the certification of the Vermont Public Service Board to regulate Adelpia's basic cable service and equipment rates in ten franchise areas. In the petitions, Adelpia argued that its cable systems faced effective competition because DBS providers offered comparable programming to at least 50% of households in the franchise areas, and the subscriber base of competing MVPDs exceeded 15% of households.⁷⁵⁹ In September 1999, the Bureau granted Adelpia's petitions.⁷⁶⁰

235. DBS service is presumed to be technically available to all subscribers due to its nationwide satellite footprint, and is presumed to be actually available if households in a franchise area are made

⁷⁵⁴ *Id.* at Exhibit C.

⁷⁵⁵ *Cable Competition Wins High Praise*, The Wakefield Daily Item, March 16, 1999, at 8.

⁷⁵⁶ *Id.*

⁷⁵⁷ *Time Warner Petition* at 8.

⁷⁵⁸ *Time Warner Order* at ¶ 10.

⁷⁵⁹ *Mountain Cable Company d/b/a Adelpia Cable Communications, Multi-Channel TV Cable Company d/b/a Adelpia Cable Communications, Better TV d/b/a Adelpia Cable Communications, Petitions for Revocation of the Certification of the Vermont Public Service Board to Regulate Basic Cable Service Rates*, Memorandum Opinion and Order ("*Adelpia Order*"), DA 99-1749 (rel. September 2, 1999), at ¶ 3.

⁷⁶⁰ *Adelpia Order* at ¶ 20.

reasonably aware that the service is available.⁷⁶¹ Adelphia provided evidence of advertisements in local media about the availability of DBS service in each of the affected franchise areas.⁷⁶²

236. According to local newspaper advertisements, DirecTV offered three months of “Total Choice” programming free to new subscribers. This programming package consisted of 85 channels including the Disney Channel, Lifetime, ESPN, and A&E Channel.⁷⁶³ Also, DBS dealers offered free professional installation or a free “do it yourself” installation kit.

237. Adelphia, in the affected Vermont localities, offered between 7 and 15 channels on its basic service tier. Adelphia’s “CableValue” tier, on average, had 24 channels, including CNN, A&E, Nickelodeon, ESPN and the New England Sports Channel. The Disney Channel was offered as a premium service in its systems.⁷⁶⁴

238. In nine of the ten affected franchise areas, DBS penetration rates ranged from 16% to 63%. In three of the ten affected franchise areas, the penetration rate for Adelphia ranged from 38% to 41%. In one of the affected franchise areas, Adelphia’s share of residential MVPD market was only 11%, smaller than DBS penetration in that area.⁷⁶⁵ In Vermont as a whole, Adelphia is the dominant cable operator, serving 70% of all households in the state.⁷⁶⁶

239. Unlike the cases described above, direct evidence of a reduction in monthly charges or change in services offered by the incumbent cable operator is unavailable. Although Adelphia upgraded a majority of its systems in Vermont, it is not clear whether the affected franchises were part of that upgrade nor whether the upgrade was undertaken as a competitive response or was previously scheduled.⁷⁶⁷

5. Lebanon, Ohio

240. In August 1997, the Lebanon Bureau of Telecommunication Services (“LBTS”) was awarded a cable franchise by the city of Lebanon. LBTS is a part of the Lebanon Department of Service – Division of Electricity.⁷⁶⁸ LBTS has been providing cable services to Lebanon residents since February

⁷⁶¹ *Id.* at ¶ 15.

⁷⁶² *Id.*

⁷⁶³ *Petition of Adelphia Cable Communications, d/b/a Mountain Cable Company, Multi-Channel TV Cable Company, and Better TV, Petitions for Revocation of Certification of the Vermont Public Service Board to Regulate Basic Cable Service Rates (“Adelphia Petition”)*, at Exhibit B.

⁷⁶⁴ *Id.*

⁷⁶⁵ *Adelphia Order* at n. 54.

⁷⁶⁶ Linda Haugsted, *Adelphia Says Vermont is Competitive*, Multichannel News, April 19, 1999, at 16.

⁷⁶⁷ *Id.*

⁷⁶⁸ *Petition of Time Warner Cable for Effective Competition, Petition for Special Relief*, CSR 5425-E (“*Time Warner Lebanon Petition*”), August 31, 1999, at Exhibit F.

1999.⁷⁶⁹ LBTS charges \$5.99 per month for basic cable service and provides 27 channels on this tier. For its combined basic and deluxe cable service, LBTS charges \$20.98 and provides 61 channels. In addition to cable service, LBTS is also planning to provide dial up Internet access at \$19.99 per month and cable Internet service at \$39.99 per month. As of February 1999, LBTS' cable system passed 70% of the households in the City of Lebanon and the remaining 30% were to be wired shortly.⁷⁷⁰

241. Time Warner is the incumbent cable operator in Lebanon. Prior to LBTS' entry, Time Warner provided service to nearly 3,000⁷⁷¹ of approximately 7,300 potential subscribers.⁷⁷² Upon LBTS' entry, in March 1999, Time Warner started to offer significant discounts to retain its subscribers and to win back subscribers who switched to LBTS. Time Warner offered a special rate of \$45 per month for a service that included all of Time Warner's "standard" services plus several premium channels and two set-top boxes. Prior to LBTS' entry, Time Warner charged \$57.10 a month for a similar package.⁷⁷³

242. By one account, as of July 1999, LBTS had 800 subscribers. A significant majority of LBTS' subscribers are former Time Warner subscribers.⁷⁷⁴ In June 1999, Time Warner reduced its 23 channel limited basic tier rate from \$7.74 per month to \$5.99 per month, a reduction of about 23%. Also, Time Warner reduced its 67 channel extended basic tier rate from \$28.17 per month to \$20.98 per month, a 25% reduction.⁷⁷⁵ In July 1999, Time Warner further reduced its extended basic rate to \$14.99 a month. Moreover, Time Warner authorized its marketing representatives to offer promotional discounts that included free movie channels to subscribers who were planning to switch to LBTS.⁷⁷⁶

243. Time Warner also announced that its Lebanon system would be one of the first Time Warner systems to offer a digital package that would include channels such as the Golf Channel and the Disney Channel. Time Warner also plans to offer high speed cable modem service to its Lebanon subscribers for \$39.95 per month. LBTS, in turn, was considering reducing its previously announced monthly rate of \$39.99 for high-speed Internet service.⁷⁷⁷

⁷⁶⁹ Steve Bennish, *City Cites Strong Cable Sales*, Dayton Daily News, June 9, 1999, at 1B.

⁷⁷⁰ *Time Warner Lebanon Petition* at Exhibit H.

⁷⁷¹ Richelle Thompson, *Eyes on Lebanon in Risky Cable War*, Cincinnati Enquirer, February 15, 1999, at A1.

⁷⁷² On December 6, 1999, the Bureau granted Time Warner's petition for a determination of effective competition in the Lebanon, Ohio franchise area. *See Petition for Revocation of the Certification of the City of Lebanon, Ohio to Regulate Basic Service and Equipment Rates*, CSR 5425-E, Memorandum Opinion and Order, DA 99-2760 (rel. December 10, 1999).

⁷⁷³ Chris Celek, *City Cable System Up and Running*, Dayton Daily News, March 11, 1999, at A5.

⁷⁷⁴ Joe Estrella, *Time Warner Cuts Rates to Fight Overbuild*, Multichannel News, July 19, 1999, at 38.

⁷⁷⁵ *Id.*

⁷⁷⁶ *Id.*

⁷⁷⁷ Tim Tresslar, *Time Warner Cuts Prices for Cable*, Dayton Daily News, June 30, 1999, at 1A.

B. Preliminary Findings

244. The case studies suggest that subscribers have benefited from “head-to-head” competition. Generally, in the communities studied, subscribers: (a) paid lower monthly charges for services and equipment; (b) have received additional program offerings; (c) have access to alternative sources of telecommunications and Internet services; (d) have received new digital services; and (e) may expect better customer service from the incumbent cable operator. The Vermont case study also suggests an absence of competitive response by the incumbent when faced with “non-wireline” head-to-head competition such as from DBS. The Vermont case is the first instance where the Bureau granted an incumbent cable operator’s petition for a determination of effective competition due to the presence of competition from DBS.

245. It appears that the incumbent operators in the localities described above have made greater use of “price” rather than “non-price” competitive responses. With the exception of the case in Vermont, the incumbents in the above examples have reduced their rates for basic or standard and premium services. In the Michigan communities studied, the incumbent cable operator also reduced equipment charges.

246. The cases described above also indicate that the new entrants in West Point and Somerville sought to attract subscribers by providing “bundled” cable and high speed Internet access services at a discounted price. To counter these service offerings, the incumbent operator in West Point responded by significantly upgrading its system.

247. The benefits of competition do not appear to accrue to subscribers in areas adjoining those communities where head-to-head competition is present. For example, reduced prices and additional services enjoyed by subscribers in Somerville and Lebanon were not available to subscribers in nearby areas. Ameritech notes that subscribers in communities adjacent to competitive communities pay more for similar services than subscribers in competitive communities.⁷⁷⁸ For example, in Independence, Ohio, Cablevision charges a total package price of \$50.69 for a channel line-up nearly identical to that offered in nearby Brooklyn, Ohio, for \$30.90 where it competes with Ameritech. Similarly, in Auburn, Michigan, AT&T charges \$45.98 for a package identical to that offered in nearby Rochester, Michigan, for \$39.40 where it faces competition from Ameritech.⁷⁷⁹

248. Some of the benefits enjoyed by subscribers in competitive areas may be short lived. In our *1998 Report*, we noted that, given the economies of scale in delivered video programming services, there are few competitive overbuild systems that will be economically viable over the long term.⁷⁸⁰ For example, head-to-head competition between the incumbent Coaxial and the new entrant Ameritech in Columbus, Ohio, discussed in our *1997 Report*, has been costly to the incumbent.⁷⁸¹ Due to mounting losses and large sums of required to upgrade, in August 1998, Coaxial sold a 75% stake in its Columbus operations to Insight Communications Company.

⁷⁷⁸ Ameritech Comments at 2.

⁷⁷⁹ *Id.*

⁷⁸⁰ *1998 Report*, 13 FCC Rcd at 24405 ¶ 234.

⁷⁸¹ Kent Gibbons, *Competition Is Costly In Columbus*, Multichannel News, November 23, 1998, at 16.

V. ADMINISTRATIVE MATTERS

249. This *1999 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).

250. It is ORDERED that the Office of Legislative and Intergovernmental Affairs shall send copies of this *1999 Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

251. It is FURTHER ORDERED that the proceeding in CS Docket No. 99-230 IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary