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

In the Matter of	)	
	)	
Annual Assessment of the Status of	)	CS Docket No. 98-102
Competition in Markets for the	)	
Delivery of Video Programming	)	

FIFTH ANNUAL REPORT

Adopted: December 17, 1998 **Released: December 23, 1998**

By the Commission: Chairman Kennard and Commissioners Ness, Powell and Tristani issuing separate statements; Commissioner Furchtgott-Roth dissenting and issuing a statement.

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I. INTRODUCTION

1. This is the Commission's fifth annual report ("*1998 Report*")[1] to Congress submitted pursuant to Section 628(g) of the Communications Act of 1934, as amended ("Communications Act"). Section 628(g) requires the Commission to report annually to Congress on the status of competition in markets for the delivery of video programming.[2] Congress imposed this annual reporting requirement in the Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable Act")[3] as a means of obtaining information on the competitive status of markets for the delivery of video programming.[4]

A. Scope of this Report

2. In this *1998 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 is 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 included in previous 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") or local multipoint distribution service ("LMDS"), satellite master antenna television ("SMATV") systems and broadcast television service. We also consider several other

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[1]The Commission's first four 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); and *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).

[2]Communications Act of 1934, as amended, § 628(g), 47 U.S.C. § 548(g) (1996) ("Communications Act").

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

[4]The 1992 Cable 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." 47 U.S.C. § 521(g).

[5]*Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, CS Dkt. No. 98-102, Notice of Inquiry ("*Notice*"), 13 FCC Rcd 13044 (1998). Appendix A provides a list of commenters.

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.[6] We include these services and providers of service because they offer, or are expected to offer, video programming in conjunction with non-video service.

4. In Section III of this report, we examine market structure and competition.[7] We evaluate horizontal concentration of 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 discuss programming issues and technological advances. In Section IV, we examine a limited number of cases where consumers have a choice between an incumbent cable operator and another MVPD provider in a particular market and report on the effects of this entry.

B. Summary of Findings

5. In the *1998 Report*, we address the status of competition in markets for the delivery of video programming, discuss how the regulatory changes enacted in the 1996 Act have affected the competitive environment, and describe barriers to competition that continue to exist. The information gathered in this report provides the last comprehensive picture of the state of cable competition prior to March 31, 1999, the date on which the Commission's authority under Section 623(c)(3) to review complaints submitted by local franchising authorities concerning increases in rates for cable programming service ("CPS") tiers sunsets.[8]

6. The *Report* finds that competitive alternatives and consumer choices are still developing. We find that cable television continues to be the primary delivery technology for the distribution of multichannel video programming and continues to occupy a dominant position in the MVPD marketplace. As of June 1998, 85% of all MVPD subscribers received video programming service from local franchised cable operators compared to 87% a year earlier.

7. There has been an increase in the total number of subscribers to noncable MVPDs. Much of this increase is attributable to the continued growth of DBS, which is attracting former cable subscribers and consumers not previously subscribing to an MVPD. Between June 1997 and June 1998, the DBS grew from approximately 5 million subscribers to 7.2 million subscribers. DBS subscribers now represent 9.40% of all MVPD subscribers compared to 6.85% a year earlier. In addition, new open video systems ("OVS") have launched in a few areas. However, there have been declines in the number of subscribers and market shares of HSD, MMDS, and SMATV over the last year and the one existing LMDS system recently terminated service. There also has been a limited number of additional cable overbuilds in the last year. In communities where the incumbent cable operators face such competition, they respond in a variety of ways, including

[6]Unlike previous reports, we do not include information about interactive video and data services ("IVDS"), which could be used to provide video services. As noted last year, few IVDS services are in operation and these frequencies are not being used for delivery of video programming. *See 1997 Report*, 13 FCC Rcd at 1098-99 ¶ 107.

[7]Appendix H of the *1994 Report* describes methods for assessing the status of competition in markets for the delivery of multichannel video programming. *1994 Report*, 9 FCC Rcd at 7623, App. H.

[8]*See* Sections 623(c)(3) and (c)(4); 47 U.S.C. § 543(c)(3) and (c)(4).

lowering prices, adding channels at the same monthly rate, improving customer service, or adding new services such as interactive programming.

8. A total of 76.6 million households subscribed to multichannel video programming services as of June 1998, up 4.1% over the 73.6 million households subscribing to MVPDs in June 1997. This subscriber growth accompanied a 2.3 percentage point increase in multichannel video programming distributors' penetration of television households to 78.2% in June 1998. During this period, the number of cable subscribers continued to grow, reaching 65.4 million as of June 1998 up about 2% over the 64.2 million cable subscribers in June 1997. The total number of noncable MVPD subscribers grew from 9.5 million as of June 1997 to 11.2 million as of June 1998, an increase of over 18% since the *1997 Report*.

9. During the period under review, cable rates rose more than four times the rate of inflation. According to the Bureau of Labor Statistics, between June 1997 and June 1998, cable prices rose 7.3% compared to a 1.7% increase in the Consumer Price Index ("CPI"), which is used to measure general price changes. A portion of these rate increases is attributable to capital expenditures for the upgrading of cable facilities (up 21% over 1996), an increase number of video and nonvideo services offered, and increased programming costs (license fees increased by 18.4% and programming expenses increased by 20.9%). In addition, we note that there is evidence indicating that where direct competition exists it affects cable operators' pricing decisions.

10. As a general matter, significant competition from telephone companies has not developed even though the Telecommunications Act of 1996 ("1996 Act")[9] removed the barriers to LEC entry into the video marketplace. 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 television operators would begin providing local telephone exchange service. With the exception of Ameritech, which has acquired 87 cable franchises and reports that it serves 200,000 subscribers, telephone entry into video markets has been slow to develop. The Bell Atlantic video distribution system in Dover Township, New Jersey, which seemed likely at one time to be the prototype for telephone entry into the video business, will be terminated by the end of 1998 or very early in 1999. Pursuant to its joint marketing agreement with DirecTV, however, Bell Atlantic will give its Dover subscribers the opportunity to switch to DirecTV. In addition, Congress developed the OVS framework as another means to encourage telephone company entry into the video marketplace. Thus far, however, few telephone companies have sought certification to provide video through OVS. Further, the technological convergence that would permit use of the telephone facilities for provision of video service has not yet occurred.

11. Noncable MVPDs that provide competitive pressure on incumbent cable operators and provide consumers with real choice still find regulatory and other barriers to entry in to markets for the delivery of video programming. MVPDs with the potential to compete with incumbent cable operators continue to experience some difficulties in obtaining programming, both from vertically integrated satellite cable programmers and from unaffiliated program vendors who continue to make exclusive agreements with cable operators. In multiple dwelling unit ("MDU") markets, while landlords may have a choice of more than one distributor, potential entry may be discouraged or limited by incumbent video programming distributors that have negotiated long-term exclusive contracts. In addition, consumers report that the inability to provide local

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

broadcast signals, pursuant to current copyright law, is a major drawback of DBS service, which affects their decisions to subscribe to this alternative MVPD.

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

• Cable Systems: The cable industry has continued to grow in terms of subscriber penetration, channel capacity, the number of programming services available, revenues, audience ratings, and expenditures on programming. 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 the initiation of nonvideo services, such as Internet access. Cable operators also are beginning to offer telephony, although the use of integrated facilities remains primarily experimental with limited exceptions.

Since the *1997 Report*, the cable television industry has continued to grow in terms of subscribership (up to 65.4 million subscribers as of June 1998, a 2% increase from June 1997), channel capacity (some systems, such as Comcast's Orange County, California system, now offer over 120 video channels), number of national satellite-delivered video programming services (up to 245 services by June 1998 from 172 in June 1997, a 41% increase, most of which can be attributed to new digital programming packages such as HBO, HBO 2, HBO 3, HBO Family), revenues (an approximate 8% increase between June 1997 and June 1998), audience ratings (non-premium cable viewership rose from a 38 share at the end of June 1997 to a 41 share at the end of June 1998), and expenditures on programming (an approximate 20% increase in program license fees paid by cable system operators).

• 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. It is estimated that there are 7.2 million DBS (DirecTV/USSB and Echostar) and medium power (Primestar) subscribers, an increase of almost 43% since the *1997 Report*. Industry reports state that 2.2 million of the 3.6 million net new MVPD subscribers in 1998, or almost two thirds, are choosing DBS. Between 3.8 and 4.0 million households are HSD users, although only about 2.0 million HSD subscribers actually purchase programming packages, a 7% decrease in the last year that is likely due to subscribers switching to DBS. DirecTV and Primestar (which is significantly owned by cable operators) have the largest number of DBS subscribers and are again among the 10 largest providers of multichannel video programming service. DBS represented a 9.4% share of the national MVPD market in June 1998 and HSD represented another 2.7% 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 1.1 million subscribers to 1.0 million subscribers between June 1997 and June 1998, a decrease of 9%. This drop in subscribership may be the result of a reduction of marketing of analog MMDS service in anticipation of deployment of digital services. The advent of digital MMDS and the recent authorization of two-way MMDS service that will make high-speed Internet and telephony possible have the potential to foster renewed MMDS growth. Wireless cable represented a 1.3% share of the national MVPD market in June 1998.

• 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 declined 19.1% since the last report, with the industry representing a 1.2% share of the national MVPD subscribership as of June 1998. Certain technological advents, such as upgraded facilities, implementation of digital transmission and microwave headend technologies, and expanded service offerings to include DBS programming, Internet access, telephone service, and security services, have the potential to foster SMATV growth.

• Broadcast TV: Broadcast networks and stations are competitors to MVPDs in the advertising and program acquisition markets. Additionally, broadcast networks and stations are suppliers of content for distribution by MVPDs. Since the *1997 Report*, the broadcast industry has continued to grow in the number of operating stations (from 1561 in 1997 to 1583 in 1998) and in advertising revenues ($32.5 billion in 1997, a 4% increase over 1996). While audience levels have declined in the last year, the four major television broadcast networks still account for a 55% share of prime time television viewing for all television households. In the last year, the Commission took several actions on digital television and the first DTV television stations started offering service in November 1998.

• LEC Entry: The 1996 Act expands 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 87 cable franchises, potentially passing more than 1.5 million homes. Seventy-two of these cable franchises are operational, in whole or in part, and it is reported that they serve at least 200,000 subscribers. Bell South 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. The growth of the LEC competitive presence in the MVPD market will probably continue in the same manner as it has until now: deliberately, and by a number of different delivery mechanisms. Whether LECs will become nation-wide competitors to the cable industry is less clear.

• 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 11 OVS operators to serve 17 areas. Most of the firms receiving OVS certification are not LECs. Bell Atlantic in Dover Township, New Jersey, and RCN in New York City and Boston are the only operating open video systems, no change over the last year. Bell Atlantic, however, is transitioning away from its Dover system and plans to ask customers to switch to its joint venture with DirecTV. Starpower, a joint venture of RCN and Potomac Electric Power Company ("PEPCO") in Washington, D.C. is currently serving 20,000 subscribers with Internet access, local telephone or long distance telephone service, or all three. It expects to begin video service by the end of the year. Between June 1997 and June 1998, the number of OVS subscribers grew from 3,000 to 66,000.

• Internet Video: At the end of 1997, 44% of all households owned a personal computer and 60 million adults and 20 million children 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 and through the WebTV and Worldgate service packages. As of June 1998, investment and development of Internet video services was continuing, though video pictures offered by Internet video still remain of less than broadcast quality. Media companies, however, continue to offer increasing amounts of video over their websites in the expectation that the pictures will be acceptable for the intended use or eventually improve to broadcasting or VCR quality. However, the medium is not a direct competitor to providers of traditional video services at this time.

• Home Video Sales and Rentals: Video cassettes and laser discs provide feature films similar to those distributed by cable operators on premium channels and others involved in the distribution of video programming. The most significant development in the home video market in the last year was the increased availability of Digital Versatile Discs ("DVDs") that were first introduced in 1997. DVD technology provides picture and audio quality that is superior to that of video cassettes. As of September 1998, 700,000 DVD players had been purchased, with over 1000 movies, documentaries and concerts available for sale or rental in the DVD format.

• Electric Utilities: Utilities have the potential to become major competitors in the telecommunications industry generally, and in the video marketplace in particular, since they 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. In particular, Tacoma City Light began offering cable service in Tacoma, Washington. PEPCO has formed a joint venture with RCN, named Starpower, that is beginning to offer video, telephone, and Internet services in the Washington, D.C. area. PEPCO is mainly providing its fiber optic backbone to this joint venture. Other utilities, including Black Hills Corporation serving the Rapid City, North Dakota, area and the municipal utility in Coldwater, Michigan, have announced plans to offer video services.

13. We also find:

• Nationally, concentration among the top MVPDs has declined since last year. DBS operators DirecTV and Primestar 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. The number of clusters of systems serving at least 100,000 subscribers is currently 117, down from the 139 reported last year. Although the number of clusters declined, the trend for clusters to increase in subscribership or size appears to be continuing, and these clustered systems now account for service to approximately 52% of the nation's cable subscribers. 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 172 in 1997 to 245 in 1998. Vertical integration of national programming services between cable operators and programmers, measured in terms of the total number services in operation, declined from last year's total of 44% to just 39% this year, the continuation of a four year trend. However, in 1998, cable MSOs, either individually or collectively, owned 50% or more of 78 national programming services. A year earlier, cable MSOs owned 50% or more of 50 national networks. Sports programming warrants special attention because of its widespread appeal and strategic significance for MVPDs. The *Report* identifies 29 regional sports networks, many owned at least in part by MSOs. The number of regional and local news networks continue to grow, with

25 news services currently competing with local broadcast stations and national cable networks (e.g., CNN).

• The program access rules adopted pursuant to the provisions of the 1992 Cable Act were designed to ensure that alternative MVPDs can acquire, on non-discriminatory terms, vertically-integrated satellite delivered programming. We recently strengthened our enforcement procedures for these rules. We observe that some former vertically integrated satellite-delivered programming service is now being distributed terrestrially. We recognize that the issue of 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 the impact on the competitive marketplace.

• Technological advances are occurring 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). 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, the Commission adopted rules and policies to implement Section 629 of the Communications Act, which is intended to ensure commercial availability of these navigation devices. The cable industry, through CableLabs, is developing standards for the interoperability of digital set-top boxes and cable modems.

II. COMPETITORS IN MARKETS FOR THE DELIVERY OF VIDEO PROGRAMMING

A. Cable Industry

14. This section addresses the performance of franchised cable system operators[10] in five major areas: (1) general performance -- both the quantitative and qualitative measures of basic services provided, subscriber levels, and viewership; (2) financial performance -- revenue, cash flow status, and stock valuations; (3) capital acquisition and disposition -- the amount of funds raised and used to improve existing physical plant and acquire new systems; (4) other performance indicators -- system transactions, cable overbuilds,[11] and rates

[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.

charged by cable operators; and (5) provision of advanced broadband services[12] -- the growth of cable data access, digital broadband services, and broadband telephony.

1. General Performance

15. Since our last report, the cable industry has continued to grow in basic cable[13] subscribership, homes passed,[14] basic cable penetration,[15] premium service subscriptions,[16] basic cable viewership, and channel capacity.[17] In addition, during 1997 and the first half of 1998, the industry began to implement some of its previously announced plans to offer expanded broadband services including digital video, Internet access through cable, interactive cable, and broadband telephony.

16. *Cable's Capacity to Serve Television Households* The number of U.S. homes with at least one television ("TV households") was reported as 97 million at the end of 1996 and 98 million at the end of 1997 and June 1998.[18] According to one source, the number of homes passed by cable was 93.7 million at the

[12]Advanced broadband services are services other than standard analog video that are offered over broadband coaxial or fiber-optic cable including digital video, Internet access through cable modems, cable telephony, Internet Protocol telephony ("IP telephony"), near-video-on-demand ("NVOD"), interactive guides and interactive programming, and other special features.

[13]This document refers 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 CPS tiers for purposes of rate regulation and often known as expanded basic, may also 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 on a broadband or fiber optic network. Channel capacity can be decreased on any given network simply by using bandwidth for other services such as Internet.

[18]*See* App. B, Tbl. B-1. 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 1998 is the same as the figure for December 1997.

end of 1996 and 94.6 million at the end of 1997, an increase of 1%.[19] The same source indicates that by the end of June 1998, the number of homes passed by cable was 95.1 million.[20] As such, the number of homes passed as a proportion of the number of TV households decreased one tenth of one percent from 96.6% in January 1997, to 96.5% in December 1997, and in the first half of 1998, increased one half of one percent to 97% of TV households.[21]

17. *Subscribership*. Basic cable television subscribership grew from 63.5 million subscribers at the end of 1996 to 64.9 million subscribers at the end of 1997, an increase of 2.2%, and increased to an estimated 65.4 million subscribers by June 30, 1998, a six month increase of about 0.8%.[22] Basic cable penetration also grew, increasing from 67.8% at the end of 1996 to 68.6% at the end of 1997 to 68.8% at the end of the first half of 1998.[23] The percentage of TV households subscribing to cable continues to increase, rising to 66.2% of all TV households by the end of 1997, and to 66.7% by the end of June 1998.[24] The number of basic cable subscribers as a percentage of the number of homes passed increased from 67.8% in 1996 to 68.6% in 1997 and to 68.8% by June 1998.[25] The number of homes subscribing to premium cable services increased by 1.6% in 1997 to 31.5 million homes from 31 million homes at the end of 1996, and the number of premium services to which homes are subscribing (known as "premium units") increased 2.6%, with 56 million premium units subscribed to by the end of 1997, and an estimated 56.4 million units subscribed to by the end of the first half of 1998, a 0.7% increase.[26]

18. *Channel Capacity*. Over the past year, cable operators have made significant capital expenditures to upgrade and rebuild cable infrastructure in order to increase channel capacity and provide additional services. Additionally, some operators have chosen to increase channel capacity through the deployment of digital platforms. Through upgrades and rebuilds, which are discussed later in this section, operators can increase the bandwidth of their networks, thus enabling them to offer additional channels of video service, as well as other services (i.e. Internet access, telephony). Through digital compression techniques, also discussed later, operators can have the option of offering their customers more video channels or a higher quality of resolution and reception. Changes to capital infrastructure and types of auxiliary services available are also discussed later in this report.

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[19]*See* App. B, Tbl. B-1. Homes passed data calculated by Paul Kagan Assocs., Inc., are tracked on a monthly basis. Thus, figures for June 1998 will demonstrate an increase or decrease as is appropriate.

[20]*See* App. B, Tbl. B-1.

[21]*Id.*

[22]*Id.*

[23]*Id.*

[24]*Id.*

[25]*Id.*

[26]*See* App. B, Tbl. B-2.

19. Some operators believe that a system will soon need to offer 150 or more channels to remain competitive.[27] Many have made commitments for upgrades that will enable them to make this possible for their customers.[28] For example, where available, Comcast's digital service offers customers over 175 digital and analog channels including 75 to 85 analog channels, 24 premium digital, 30 to 40 digital pay-per-view[29] channels, and 40 audio music channels.[30] MediaOne's digital service offers approximately 189 channels including up to 77 analog, 72 digital video channels, and 40 digital music channels.[31] Cablevision Systems Corporation offers over 100 channels in some of its service areas, and other operators are preparing to make similar offerings to their subscribers.[32] As such offerings by cable operators continue to be made, average channel capacity for cable systems continues to increase.[33] In August 1997, analysts estimated that the year-end average cable system analog channel capacity would reach 78 channels by year-end 1997, and 90 channels by the end of 1998.[34]

20. According to one source, cable systems with a capacity of 30 or more channels accounted for 83% of cable systems in October 1997.[35] This represents 8,260 systems nationwide.[36] The percentage of

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[27]Paul Kagan Assocs., Inc., *Resurgent TCI Upgrades Its Outlook*, Cable TV Investor, Apr. 14, 1998, at 4.

[28]*See* paras. 37-41 *infra*.

[29]A pay-per-view ("PPV") network provides a single program stream of video on a dedicated channel. Customers can opt to purchase the programming on a program by program basis, or they can opt not to purchase the programming available. Regardless of the customers purchasing decisions, a pay-per-view channel is still part of the cable package.

[30]Comcast Comments at 13, and Comcast Corporation, *Comcast Reports Strong Third Quarter Results*, (news release), Nov. 9, 1998. *See also* para. 49 *infra*. As of August 1998, Comcast's digital service was available to 1.5 million households in Orange County and Sacramento, California; Greater Philadelphia, Pennsylvania; Baltimore, Maryland; parts of Middlesex, Union, and Essex Counties, New Jersey; Indianapolis, Indiana; and Southeast Michigan. As of November 1998, Comcast had over 50,000 subscribers to digital service and expects to have 60,000 subscribers by year-end 1998.

[31]MediaOne Comments at 14; telephone interview with Bill Black, Director of Corporate Communications for the Midwest Region, MediaOne, Dec. 8, 1998. As of May 1998, Media One was offering digital service to 115,000 homes passed in Canton, Plymouth, and Northville, Michigan. As of November 1998, Media One was additionally offering digital service in Southfield, Michigan for a total of 152,000 homes passed by digital cable.

[32]Paul Kagan Assocs., Inc., *First Stats From New Product Launches*, Cable TV Investor, Apr. 14, 1998, at 7.

[33]Paul Kagan Assocs., Inc., *Plain Old Cable Growth Not Out of Style*, Cable TV Investor, Apr. 14, 1998, at 2.

[34]Paul Kagan Assocs., Inc., *Weighted Cable Analog Channel Capacity Model*, Cable TV Programming, Aug. 31, 1997, at 1. Industry observers indicate that measuring digital channel capacity is much more difficult than measuring standard analog transmission capacity. As such, no research entity is currently attempting to measure average channel capacity.

[35]*See* App. B, Tbl. B-3. Use of October to October data is consistent with our *1997 Report*, and is the method used by Warren Publishing, Inc., 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

(continued...)

systems with channel capacities of 54 channels or more accounted for 19% of cable systems in October 1997, or 1,886 systems.[37] In October 1998, cable systems with a capacity of 30 or more channels accounted for 84.6% of cable systems, or 8,328 systems.[38] Cable systems with channel capacities of 54 channels or more accounted for 20.7% of cable systems in October 1998, or 2,040 systems.[39]

21. In October 1997, 98.2% of all subscribers were served by systems with capacities of 30 channels or more.[40] Moreover, 58.4% of all subscribers were served by systems with capacities of 54 or more channels in October 1997.[41] In October 1998, 98.8% of all subscribers were served by systems with capacities of 30 channels or more[42] and 61.51% of all subscribers were served by systems with capacities of 54 or more channels in October 1998.[43]

22. *Viewership*. As noted in last year's report, viewership of non-premium cable networks has grown significantly over the past decade, while viewership of broadcast television stations has steadily declined.[44] This trend continues. Twenty-four hour a day, seven day a week, non-premium cable viewership rose from a 38 share[45] at the end of June 1997 to a 41 share at the end of June 1998.[46] Twenty-four hour a day,

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[35](...continued)
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]*See* App. B, Tbl. B-4. Use of October to October data is consistent with our *1997 Report*, and is the method used by Warren Publishing, Inc., 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 reports the percentage of systems responding to the Warren poll (*i.e.*, we subtract out the number of systems "not available" for response).

[41]*See* App. B, Tbl. B-4.

[42]*Id.*

[43]*Id.*

[44]Nielsen Media Research, *Nielsen Television Index/Monitor Plus*, Aug. 1998.

[45]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.

[46]Nielsen Media Research, *Nielsen Television Index/Monitor Plus*, Aug. 1998. The *Nielsen Television Index/Monitor Plus* reports non-premium cable viewership as "cable origination" viewing shares, and premium cable viewership as "pay" shares. According to Nielsen, cable origination includes the basic cable tier, the cable
(continued...)

seven day a week broadcast television viewership decreased from a 64 share at the end of June 1997 to a 61 share at the end of June 1998.[47]

23. *Cable Networks.* In 1997, the number of basic cable networks increased by five, from 126 to 131 total basic cable networks, a 4% increase.[48] During the first half of 1998, the number of basic cable networks increased by two to 133, a 1.5% half-year increase.[49] The number of premium networks decreased by four networks, from 18 to 14, a 22.2% decrease between the end of 1996 and the end of 1997, but increased by six channels during the first half of 1998, to reach 20 total premium networks, a 42.9% half year increase.[50] The number of pay-per-view networks decreased, from seven to six networks in 1997, a one network, 14.2% decline.[51] The number of PPV networks, however, increased by three networks during the first half of 1998 to reach nine total PPV networks, a half-year increase of 50%.[52] The number of networks classified as combined decreased by approximately 31% or by four networks in the first half of 1998 from 13 to nine.[53]

24. *Programming Costs.* License fees paid by cable system operators to basic cable network programmers increased by 18.4%, from approximately $3.1 billion in 1996 to $3.7 billion in 1997.[54] Analysts

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[46](...continued)
programming service ("CPS") tier, also known as extended basic, and pay-per-view (defined as payment on a per-program basis). Nielsen separately reports "pay" viewing shares as only premium tier (defined as payment on a per-channel basis for networks such as HBO and Showtime).

[47]Nielsen Media Research, *Nielsen Television Index/Monitor Plus*, Aug. 1998. "Broadcast" shares include network affiliates, independent, and public broadcast stations.

[48]*See* App. B, Tbl. B-5.

[49]*See* App. B, Tbl. B-5. *See also* App. D, Tbls. D-1 through D-4. Some of the most recent nationwide network launches include: Cañales ñ (a digital package of 8 video programming services), BBC America, Discovery Health, Soap Channel, Toon Disney, ZDTV: Your Computer Channel. Networks that were discontinued include: Q2 and Request TV 1, 2, & 3.

[50]*See* App. B, Tbl. B-5; NCTA Comments at 53. The increase in the number of networks classified as premium during the first half of 1998 may be explained by the decision of some networks to sell their services exclusively under one category (e.g. basic or premium), as opposed to "combined," which refers to cable networks that fall under more than one service category. For example, the Disney Channel is sold on the basic tier in some systems, while it is sold as a premium service on other systems, thus it is classified only within the "combined" category.

[51]*See* App. B, Tbl. B-5.

[52]*See* App. B, Tbl. B-5. Again, the increase in the number of networks classified as pay-per-view during the first half of 1998 may be explained by the decision of some networks to sell their services exclusively under one category (e.g. basic, premium, or pay-per-view).

[53]*See* App. B, Tbl. B-5.

[54] Paul Kagan Assocs., Inc., *Basic Cable Network Economics (1983-2007)*, Cable Program Investor, Mar. 13, (continued...)

estimate that in 1998 fees will increase by an additional 20.5% to reach $4.4 billion.[55] At the same time, programming expenses for the cable networks themselves have reportedly increased 20.9% in 1997 to $4.1 billion and an estimated 16.7% in 1998 to an estimated $4.8 billion.[56] These increased programming costs for cable operators can be, and often are, passed along to cable subscribers as allowed for under the Commission's rules.[57]

25. In June 1998, a voluntary questionnaire seeking information on the source of programming cost increases was distributed by the Commission to six multiple system operators ("MSOs").[58] The Cable Services Bureau analyzed the responses and prepared a Report.[59] The responses of four[60] of those questioned revealed that sports programming accounted for 26.7% of total expenditures for regulated programming in 1997 (or $127.6 million). Those four MSOs attributed 19.4% of rate increases to sports programming costs. Some cable operators note that distribution rights for NFL and NBA events have increased by 100% to 150%, while the NHL has increased its distribution rights fees 260%.[61] Cox estimates that 27% of its total programming costs were attributable to sports programming in 1997.[62] MediaOne indicates that its sports

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[54](...continued)
1998, at 3. 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.

[55]Paul Kagan Assocs., Inc., *Basic Cable Network Economics (1983-2007)*, Cable Program Investor, Mar. 13, 1998, at 3.

[56]*Id.*

[57]47 C.F.R. § 76.922(f)(6).

[58]The six largest MSOs, in terms of subscriber size, were selected for this survey. They are: Cablevision Systems Corporation, Comcast Corporation, Cox Communications, Inc., MediaOne, Inc., TCI Communications, Inc., and Time Warner Cable. This questionnaire was a follow-up of last year's annual competition report. *See 1997 Report*, 13 FCC Rcd at 1239, *Separate Statement of Chairman William E. Kennard*.

[59]This Report is attached as Appendix F and does not necessarily reflect the views of the Commission itself.

[60]The responses of the MSOs in this study were voluntary. Two MSOs did not provide enough information on certain questions to complete an analysis inclusive of their responses *(i.e*., insufficient data).

[61]Comcast Reply Comments at 22; Mike Reynolds, *Raising the Promotional Stakes*, Cable World, May 4, 1998, at 138; William M. Carley, *GE's TV Division Begins a Program To Control Costs*, The Wall Street Journal, Aug. 20, 1998, at C22; and Kyle Pope, *CBS to Shift $50 Million From Affiliates To Help Pay Bill for NFL Broadcasts*, The Wall Street Journal, Jun. 1, 1998, at B6. ESPN bid $4.8 billion for rights to the NFL telecast package. Even broadcasters have found sports rights increasingly expensive to attain in 1997 and 1998. In early 1998, CBS Corp. won the rights to pay $500 million a year to telecast NFL football, while NBC passed up its chance to because of high rights fees.

[62]Cox Comments at 13. Cox also estimates that in 1997, 26% of programming costs were attributed to children's programming.

programming costs grew to 19.75% of all programming costs in 1997.[63] Comcast notes that within the past few years, almost all regional sports networks have migrated from premium tiers (at $8 -$14 per month) to the basic cable package.[64] Comcast further states that while this migration has likely contributed to the increase in the price of the basic cable package for subscribers, these tier migrations have generally met with customer approval.[65] It also asserts that the shift of sports programming back to the basic cable tiers should address Congress' 1992 concerns regarding customers' lack of access to local sports programming when it is offered on premium channels.[66]

26. The responses to the 1998 voluntary questionnaire also revealed that, according to the same four MSOs, news programming costs accounted for 11.2% (or $53.3 million) of total programming cost, children's programming accounted for 11.5% (or $55.2 million), and the general entertainment category labeled "all other," accounted for 50.6% (or $242.1 million) of the total programming. The MSOs attributed 11.9% of their rate increases to news programming, 4.5% to children's programming, and 64.2% to the "all other category." A&E Networks notes that the audience demand for higher quality programming content has been expanding, and thus programming networks must pay more for the same pool of talent, which consequently increases the price of that talent.[67] This increase in the price for talent often results in an increase in fees charged to cable networks, which are often passed through to cable operators. The networks' strategy to increase original programming and investment in promotion for that original programming also contributes to the rising price of programming.[68]

27. Other expenses incurred by cable operators are copyright fees for broadcast signal carriage. Fees collected for the first half of 1998, however, showed a noticeable decline over past half-years mostly due to the reclassification of WTBS from a distant broadcast superstation to a cable network. As of December 10, 1998,[69] copyright fees paid by cable system operators for broadcast signal carriage under Section 111 of the Copyright Act[70] for the period July 1 to December 31, 1996, were $88.98 million, and for the period January

[63]MediaOne Comments at 17.

[64]Comcast Reply Comments at 22.

[65]*Id.*

[66]*Id. See also* 47 U.S.C § 521 nt (This section required the Commission to report to Congress on sports migration).

[67]A&E Comments at 1.

[68]*See* Mike Reynolds, *Raising the Promotional Stakes*, Cable World, May 4, 1998, at 138. Broadcast networks are facing similar programming cost increases. NBC, for example, recently agreed to pay $13 million a week for "ER," a 300%-500% increase over the previous year.

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

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

1 to June 30, 1997 fees collected were $78.23 million.[71] For the period July 1 to December 31, 1997, fees collected as of December 10, 1998 were $77.34 million, and for the period January 1 to June 31, 1998 fees collected were $51.87 million.[72]

2. Financial Performance

28. Data concerning cable industry revenue and cash flow indicate that the cable industry remained financially strong in 1997 and the first half of 1998. Stock prices according to the Kagan MSO Index[73] also show growth in the cable multichannel service operator sector.

29. *Cable Industry Revenue*. Annual cable industry total revenue grew 10.1% in 1997 to reach $30.784 billion.[74] Analysts estimate 1998 year-end total revenue will reach $32.627 billion, an estimated 6% increase.[75] By the end of 1997, revenue per subscriber grew 7.7% to $479.40 per subscriber per year, or $39.95 per subscriber per month. Analysts estimate that by 1998 year-end revenue per subscriber per year, will reach approximately $500, or $42 per subscriber per month.[76]

30. When cable system revenue is indexed by source, the category with the greatest amount of growth in 1997 was the advanced video services (analog and digital) sector,[77] increasing almost 130%, to reach

[71]Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Dec. 10, 1998. 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.

[72]Copyright Office, Library of Congress, *Licensing Division Report of Receipts*, Dec. 10, 1998. The decline in fees collected for the first period of 1998 are mostly due to the changed status of WTBS from superstation to cable network. As such copyright fees can no longer be collected for network TBS.

[73]*See* Paul Kagan Assocs., Inc., *Cable MSO Stocks,* Cable TV Investor, Sept. 3, 1998, at 6. The Kagan MSO Index consists of: Century Communications, Cable Michigan, MediaOne Group, Cox Communications, Adelphia Communications, Comcast Communications, Time Warner, Cablevision Systems, Inc., Tele-communications Inc. tracking stock A., TCA Cable, Jones Intercable tracking stock A., TCI Satellite, and Rogers Communications tracking stock B.

[74]*See* App. B, Tbl. B-6.

[75]*Id.*

[76]*Id.*

[77]The advanced video services sector includes both digital and analog advanced video services. Digital video services can provide superior video picture quality and increased channel capacity through compression techniques. Advanced analog services are usually deployed on 750 MHz or higher systems and provide users with certain two-way capabilities such as PPV and NVOD. Both digital and analog advanced services require the use of a special set-top box.

$208 million, as subscribers began to take advantage of operators' new offerings.[78] Analysts estimate that advanced services revenues will double by the end of 1998 to reach an estimated $424 million.[79] In the more traditional revenue-generating sectors of cable, the greatest revenue generating segment was the pay-per-view sector, which had revenue increases of 27.2% from $647 million annual revenue in 1996 to $823 million annual revenue in 1997.[80] Industry analysts predict total pay-per-view revenue will decrease 5.1% in 1998 to an estimated $781 million.[81] Advertising revenues retained by MSOs increased almost 16% in 1997 from $1.7 billion in annual revenue in 1996 to $1.9 billion in 1997.[82] Industry analysts predict this revenue sector will increase to an estimated $2.2 billion by year-end 1998.[83] Premium tier revenues and home shopping revenues grew the least in 1997. Annual revenue from pay tiers decreased approximately 1% from $4.955 billion in 1996 to $4.952 billion in 1997, and are expected to decline to $4.913 billion by the end of 1998.[84] Revenue from home shopping services grew from $145 million in 1996 to $152 million in 1997, a 4.8% increase, and is expected to increase to $160 million by year-end 1998.[85]

31. *Cable Industry Cash Flow.* Cash flow may be used to value the financial position of cable firms. Analysts often report industry-wide cash flow in terms of operating cash flow. In the case of individual firms it may be expressed in terms of a proxy known as "EBITDA" (earnings before interest, taxes, depreciation, and amortization). Financial analysts report that industry-wide cash flow increased by 11.6%

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[78]*See* App. B, Tbl. B-6. 1995 was the first year analysts classified "advanced services" as a separate revenue generating category reporting $23 million of revenue for cable operators. In 1996, "advanced services" brought in $91 million of revenue to cable operators, a 295% increase.

[79]*See* App. B, Tbl. B-6.

[80]*See* App. B, Tbl. B-6. Request Television, Inc. *1997 PPV Year in Review*, Jan. 1998, at 4, 6, and 11. According to Request Television's annual pay-per-view industry report, 95.6% of total PPV revenue came from boxing (61.2%) and wrestling (34.4%) events. Request Television expects boxing's share to decrease in the next year and wrestling's share to increase. The report also states that the cable retail price of PPV movies is likely to decrease in response to DirecTV's retail rates.

[81]*See* App. B, Tbl. B-6. *See also* Joe Schlosser, *Question mark for cable's digital future*, Broadcasting & Cable, Mar. 23, 1998, at 18, and Kim Mitchell, *PPV Packs a Punch Thanks to Tyson's Bite*, Cable World, Jan. 15, 1998, at 14. A decrease in PPV revenues is expected because a decrease is expected in the number of high-profile boxing matches, especially boxing matches with Mike Tyson. In 1997, a single boxing match in which Mike Tyson participated accounted for nearly $100 million in PPV revenue.

[82]*See* App. B, Tbl. B-6. When taking programming from a particular network, MSOs are given slots of time for which they are allowed to run local advertising availabilities ("ad avails"). The MSOs are entitled to keep all proceeds from these local ad avails. The cable networks retain all the revenue generated from national ad avails, which constitutes the larger percentage of advertising time and revenue.

[83]*See* App. B, Tbl. B-6.

[84]NCTA, *Cable Advertising Revenue*, Cable Television Developments, Spring 1998, at 9. NCTA does not predict 1998 year-end revenue.

[85]*See* App. B, Tbl. B-6.

between the end of 1996 and the end of 1997, from $11.972 billion to $13.369 billion.[86] Analysts estimate that by year-end 1998, cash flow will increase 8% to reach $14.440 billion.[87] For 1997, the cable industry generated approximately $208.23 in annual cash flow per subscriber, about $18 higher than the $190.54 per subscriber generated in 1996.[88] Analysts estimate that cash flow per subscriber per year will increase by approximately $13 to reach $220.80 in 1998.[89] The ratio of cash flow to revenue ("cash flow margin") increased from 42.3% in 1996 to 43.4% in 1997, and is expected to increase to 44.2% in 1998.[90]

32. *Stock Prices*. Between January 1997 and June 1998, stock market values of cable MSOs, as represented by the Kagan MSO Index, grew steadily, with growth accelerating between the fourth quarter of 1997 and the second quarter of 1998.[91] By comparison, during the same period, both the Standard and Poor's Index of 500 widely-held stocks[92] ("S&P 500") and the Dow Jones Industrial Average[93] ("Dow Jones") grew more modestly.[94] Indexed to a scale of January 1997 equalling 100, all three indices grew during the first quarter of 1998 and most of the second quarter of 1998, but by the end of the second quarter 1998, the Kagan

[86]*Id.*

[87]*Id.*

[88]*Id.*

[89]*Id.*

[90]*Id.* Cash flow margin is a commonly used financial analysis tool for determining an MSO's operating efficiency, profitability, and liquidity.

[91]Paul Kagan Assoc., Inc., *Index Performance Table*, Cable TV Investor: Sept. 3, 1998, at 6; Aug. 10, 1998, at 14; May 26, 1998, at 18; Apr. 14, 1998, at 14; Feb 24, 1998, insert; Nov. 21, 1997, insert; Jul. 9, 1997, insert; Jun. 13, 1997, insert; May 20, 1997, insert; Apr. 30, 1997, insert; Feb. 24, 1997, insert; Jan. 7, 1997, at 16; Oct. 21, 1996, insert; Aug. 21, 1996, insert; Jul. 23, 1996, at 1; Jul. 23, 1996, insert; May 21, 1996, insert; Mar. 15, 1996, insert; and Feb. 29, 1996, insert. The Kagan MSO Index grew 84% (from 1489.59 to 2744.71) between the fourth quarter of 1997 and the end of the second quarter of 1998.

[92]The Standard and Poor's Index 500 is a stock index that tracks a compilation of 500 industrial, transportation, financial, and utility stocks.

[93]The Dow Jones Industrial Average is a price-weighted average of 30 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.

[94]Paul Kagan Assoc., Inc., *Index Performance Table*, Cable TV Investor: Sept. 3, 1998, at 6; Aug. 10, 1998, at 14; May 26, 1998, at 18; Apr. 14, 1998, at 14; Feb 24, 1998, insert; Nov. 21, 1997, insert; Jul. 9, 1997, insert; Jun. 13, 1997, insert; May 20, 1997, insert; Apr. 30, 1997, insert; Feb. 24, 1997, insert; Jan. 7, 1997, at 16; Oct. 21, 1996, insert; Aug. 21, 1996, insert; Jul. 23, 1996, at 1; Jul. 23, 1996, insert; May 21, 1996, insert; Mar. 15, 1996, insert; and Feb. 29, 1996, insert. The S&P 500 grew 30% between the fourth quarter 1997 and the end of the second quarter 1998, and the Dow Jones grew 25%.

MSO Index grew 59 percentage points more than the Dow Jones and 54 percentage points more than the S&P 500 indices.[95]

33. A number of specific events contributed to the increase in MSO stock market values (i.e. "MSO valuations") in 1997 and the first half of 1998. As we reported in the *1997 Report*, the collapse of the News Corporation's planned $1 billion acquisition of Echostar, and Microsoft's $1 billion investment in Comcast, contributed to the increase observed in MSO valuations in 1997.[96] Also contributing to increased market valuations in 1997 were speculations of an AT&T-TCI merger, and Southwestern Bell's decision to exit the MVPD marketplace.[97] AT&T's purchase of Teleport from a consortium of MSOs and purchases made by Microsoft co-founder Paul Allen[98] contributed to increases in MSO valuations in late 1997 and the first half of 1998.[99] The actual announcement of AT&T's proposed purchase of TCI led to increases in MSO market valuations after the second quarter of 1998.[100]

34. Analysts indicate that specific cable operators are finding very high market acceptance to initial launches of cable-telephony service (up to 20% penetration in some areas), which is having a favorable impact on industry-wide stock values.[101] Revenue gains of 6%-11%, and cash flow growth of 8%-12%, with cash flow margins stable or increasing, also seems to be key to strong industry-wide market valuations. However, some analysts assert that several factors will limit revenue growth in 1998, including public pressure to restrict price increases.[102]

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[95]*Id.*

[96]*See 1997 Report*, 13 FCC Rcd at 1061 ¶ 34.

[97]Paul Kagan Assocs., Inc., *The Public Market*, Cable TV Financial Data Book, Jul. 1998, at 76.

[98]*See* para. 149 *infra*. Microsoft co-founder Paul Allen purchased Marcus Cable for $2.8 billion, Charter Communications for $4.5 billion, and there are indications of a possible deal with Century Communications.

[99]Paul Kagan Assocs., Inc., *The Public Market*, Cable TV Financial Data Book, Jul. 1998, at 76.

[100]Jessica Reif Cohen, Harry Wagner, and Suk Han, *Cable Television: Q2 Preview*, Merrill Lynch United States Media/Entertainment, Jul. 9, 1998, at 5. To many in the investment community, AT&T's planned purchase of TCI indicates that, in general, cable MSOs are more highly valued than before. AT&T specifically indicates that TCI is valuable to them because of the cable operator's ability to provide AT&T with access to millions of American households through direct wiring into the home, hence the premium over prevailing market prices offered by AT&T for the acquisition. AT&T claims to have experienced great difficulty in developing a facilities-based entry into local service telephony market. Thus, by purchasing TCI, AT&T gains the infrastructure needed to begin entering the local telephone market. Because other cable operators also can offer similar infrastructure to others interested in entering the local telephony market, the proposed acquisition of TCI by AT&T has resulted in higher stock market values for cable MSOs generally.

[101]Jessica Reif Cohen, Harry Wagner, and Suk Han, *Cable Television: Q2 Preview*, Merrill Lynch United States Media/Entertainment, Jul. 9, 1998, at 6.

[102]Richard Bilotti, Marc Nabi, and Gary Lieberman, *Cable/Satellite Communications*, Cable Television 1Q98 Review and 2Q98 Preview: Morgan Stanley Dean Witter, Apr. 14, 1998, at 1.

3. Capital Acquisition and Disposition

35. *Cable 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. Between July 1 and December 31, 1997, the cable industry acquired $865 million in private debt financing (i.e., financing received by MSOs from banks, insurance companies, and other institutional investors).[103] In the second half of 1997, $2.775 billion of net new public debt was issued.[104] The remaining industry financing was obtained through a mixture of private equity (i.e., equity received by MSOs from individuals, private corporations, venture capital firms, and investment banks) and public equity offerings (i.e., stock markets). Private markets yielded $88 million in the second half of 1997, and public markets yielded $180 million.[105]

36. From January through June 1998, the cable industry acquired more private debt than during the same period in 1997. Between January and June 1998, the industry acquired $1.6 billion of private debt compared with $735 million for the same period in 1997.[106] Less public debt was issued between January and June 1998 than during the same period in 1997. Approximately $5.8 billion of net new public debt was issued for the first half of 1998 while approximately $7 billion was issued during the same time period in 1997.[107] Between January and June 1998, $1.7 billion of public equity activity was generated while $1.1 billion was generated for the same period in 1997. Private equity generated from January to June 1998 was $50 million whereas only $12 million was generated between January and June the year before.[108]

37. *Capital Expenditures/Capital Investment*. In 1997, the cable industry invested a total of about $6.8 billion on the construction of plant and equipment, a 21% increase over the $5.6 billion spent in 1996.[109] Total capital expenditures are expected to grow again in 1998 to reach an estimated $7.7 billion by year's end, an increase of 13%.[110] Expenditures in 1997 included approximately $960 million for maintenance, $700

[103]Paul Kagan Assoc., Inc., *Cable TV Financing Snapshot* (facsimile), Nov. 9, 1998; Jan. 22, 1998, at 11; Nov. 30, 1997, at 6; Oct. 31, 1997, at 11; Sept. 15 and 19, 1997, at 6; and Aug. 31, 1997, at 7.

[104]*Id*.

[105]*Id*.

[106]Paul Kagan Assocs., Inc., *Cable Financing Snapshot - May*, Cable TV Finance, Aug. 24, 1998, at 4.

[107]*Id*.

[108]*Id*.

[109]Paul Kagan Assocs., Inc., *Estimated Capital Flows in Cable TV*, Cable TV Finance, May 31, 1998, at 1.

[110]*Id*.

million for new builds,[111] $1.65 billion for rebuilds,[112] $2 billion for upgrades,[113] and $1.46 billion for converters/ inventory.[114] Most of the expenditures in 1997, projected expenditures for year-end 1998, and expenditures made in the past few years have been for upgrades or rebuilds (i.e. the improvement of existing plant). Since 1995, expenditures for the improvement of existing plant has increased approximately 20% each year.[115] In 1995, operators spent $2.5 billion on upgrades and rebuilds combined, while in 1996, $3 billion was spent, and in 1997, operators spent $3.7 billion.[116] Analysts estimate that in 1998 money spent on upgrades and rebuilds alone will reach $4.3 billion.[117]

38. The trend to improve existing plant reflects the fact that while many systems currently have sufficient bandwidth to provide advanced services they cannot do so without sacrificing channel capacity for existing video services. Additionally, many systems have enough bandwidth to provide two-way[118] services, but not without the risk of ambient interference. Higher amounts of bandwidth allow operators to increase channel capacity for video and other downstream services, as well as the capacity to maintain reliable two-way activated systems.[119] In order to offer customers the advanced, two-way services, such as telephony and cable-only Internet access,[120] cable operators must make their systems two-way activated. Thus, as was discussed earlier, MSOs are expected to improve their systems through increased channel capacity. Indeed, many cable

[111]"New builds" are the construction of new cable plant where none existed before.

[112]"Rebuilds" are improvements to existing systems that do not retain much of the old system plant and equipment, instead laying mostly new plant and equipment.

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

[114]Paul Kagan Assocs., Inc., *Estimated Capital Flows in Cable TV,* Cable TV Finance, May 31, 1998, at 1.

[115]*Id.*

[116]*Id.*

[117]*Id.*

[118]"Two-way services" are services that use "upstream" and "downstream" transfer of data. "Downstream" is the path over cable infrastructure to the customer. Services that use only downstream data transfer include video and cable modem Internet access that uses a telephone company wireline return path ("telco-return"). "Upstream" is the return path back to the operator, and is required for telephony service and cable modem Internet access service that uses cable infrastructure only.

[119]A system that is "two-way" activated is capable of both sending and receiving data, video, or voice over its infrastructure, otherwise services depend on telco-return.

[120]"Cable-only" Internet access is access to the Internet provided solely over cable infrastructure as opposed to using cable infrastructure for data sent to the customer and using telephone company wireline for data sent to the cable operator for deployment to the Internet.

operators are spending millions to upgrade and rebuild their systems. In addition, a substantial portion of total expenditures continues to be spent on new builds, as U.S. housing starts have grown since January 1997.[121]

39. In 1997, many of the large MSOs spent as much as half a billion dollars each on capital expenditures.[122] For example, Cox states that by the end of 1998, it will have spent $3.3 billion over the past five years to upgrade its infrastructure to deploy new services to subscribers.[123] Capital expenditures in 1997 alone for Cox were $708 million.[124] MediaOne spent approximately $1.6 billion in 1997 on rebuilds and upgrades.[125] In 1996 and 1997, Comcast spent $800 million to upgrade most of its cable systems nationwide.[126] In 1998, it expects to spend an additional $700 million.[127] As a result of these investments, Comcast expects to meet its Social Contract commitments with the Commission,[128] such that by March 31, 1999, 80% of its cable subscribers will be served by systems of 550 MHz or greater, with 60% of its cable subscribers served by systems of 750 MHz.[129] Comcast says that 70% of its subscribers are presently served by systems at 550 MHz or higher.[130] Additionally, Comcast has invested in infrastructure that will increase channel capacity and bring high-speed Internet access to several specific systems around the country.[131]

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[121]U.S. Census Bureau, *Housing Starts -- Seasonally Adjusted Annual Rate* http://www.census.gov/ftp/pub/const/www/c20index.html

[122]Richard Bilotti, Marc Nabi and Gary Lieberman, *Cable Television: 1Q98 Review and 2Q98 Preview*, Morgan Stanley Dean Witter, Apr. 14, 1998, at 3.

[123]Cox Comments at 2.

[124]These expenditures wre primarily for the upgrades necessary to support quality delivery of multiple services such as digital video, telephony, and internet access. Cox Communications, Inc., Cox Communications, Inc., *Summary Annual Report 97*, at 22.

[125]MediaOne Comments at 16.

[126]The expenditure was for the deployment of fiber optic cable and improvement Comcast's existing broadband network. Comcast Reply Comments at 20.

[127]*Id*.

[128]Under a social contract a cable operator is given substantial flexibility in setting rates for new regulated services, such as new service tiers offering additional program channels. In exchange, customers are guaranteed that rates for current services will be kept stable and reasonable. An operator also must commit to maintaining or improving service quality. A social contract is effective for a term of years. It must be approved and overseen by the Commission.

[129]Comcast Reply Comments at 12.

[130]*Id*.

[131]*Id*. In Southeast Michigan, Comcast spent over $110 million on upgrades in 98 communities, serving over 500,000 subscribers to provide over 175 analog and digital channels of video programming and high-speed Internet access. In Chesterfield County, Virginia, Comcast is currently spending $32 million deploying fiber optics for systems serving approximately 70,000 subscribers to offer 34 new channel options and Internet access. In

(continued...)

40. In 1997, TCI's cable group spent $538 million, as compared to $1,834 million and $1,591 million during 1996 and 1995, respectively.[132] It is estimated that almost $394 million of its expenditures were for maintenance and extension capital, while $69.2 was for the provision of data services, $56.6 million were for rebuilds and upgrades, and the remaining $20 million for miscellaneous expenditures.[133] Though not specific about where most future upgrades might occur, TCI indicates, prior to its decision to potentially merge with AT&T, that it plans to spend $1.8 billion between 1998 and 2000 to complete its upgrade program.[134] It states that these funds will be used to increase channel capacity, provide high-speed data, and pay-per-view video, but does not include plans for voice telephony.[135] Both AT&T and TCI suppose that $400 to $500 million of the estimated $1.8 billion upgrade will be expended by TCI prior to the anticipated merger, so that one-third of TCI's existing cable plant will be upgraded by the consummation of the proposed merger.[136]

41. As a result of these expenditures, some cable system subscribers now have access to improved cable plant. By the end of the third quarter of 1998, Comcast had upgraded 60% of its homes passed by two-way cable infrastructure of 750 MHz or higher.[137] As of June 1998, Cox had upgraded 56% of its systems to 750 MHZ or higher with 50% two-way activated.[138] Cablevision has just less than half of its systems, or 43%, at 750 MHz or higher, but it has almost three quarters, or 70%, of its systems two-way activated.[139] Media One has 45% of its systems at 750 MHz or higher with 49% two-way activated.[140] Adelphia has 30% of its

[131](...continued)
Charleston, South Carolina, Comcast will spend $42 million, and in Orange County, California, Comcast will spend $47 million to deploy fiber optic cable to provide increased channel offerings and Internet access for more than 80,000 subscribers.

[132]Tele-Communications Inc., *Form 10-K for the Year Ended December 31, 1997*, at II-48, 151.

[133]Richard Bilotti, Marc Nabi, and Gary Lieberman, *Cable Television: 1Q98 Review and 2Q98 Preview*, Morgan Stanley Dean Witter, Apr. 14, 1998, at 86, Tbl. 66.

[134]Application for Consideration to Transfer the Control of Licenses and Section 214 Authorizations, CS Docket 98-178, at Public Interest Showing 38-39, and Tele-Communications, Inc., *1997 Stockholders Report*, at 10.

[135]Application for Consideration to Transfer the Control of Licenses and Section 214 Authorizations, CS Docket 98-178, at Public Interest Showing 38-39.

[136]Application for Consideration to Transfer the Control of Licenses and Section 214 Authorizations, CS Docket 98-178, at Public Interest Showing 38-39.

[137]Comcast Corporation, *Comcast Reports Strong Third Quarter Results* (news release), Nov. 9, 1998.

[138]John M. Higgins with Price Colman and Richard Tedesco, *AT&T Makes Local Call*, Broadcasting & Cable, Jun. 29, 1998, at 6.

[139]*Id*.

[140]Telephone interview with Dave Wood, Director of Media Relations, MediaOne (Dec. 8, 1998).

systems at 750 MHz or higher with 21% two-way activated.[141] And TCI has 20% of its systems at 750 MHz or higher with 26% two-way activated.[142]

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 1996 and 1997 from 99 to 112 systems.[143] From January 1998 through June 1998, 45 transactions were recorded.[144] The total number of subscribers served and the average system size of systems changing hands continue to vary greatly from year to year. The average system size increased 26.5% from an average 79,322 subscribers per system in 1996 to an average 100,353 subscribers per system in 1997. Between January and June 1998, the average number of subscribers per system transaction was 405,366, a half-year increase of over 300%.[145] The total number of subscribers affected by system transactions in 1997 increased 43.4% from approximately 8 million subscribers in 1996 to approximately 11 million subscribers in 1997.[146] Thus far in 1998, the total number of subscribers affected has been approximately 18 million subscribers.[147] The total dollar value of transactions increased 41.5% between 1996 and 1997, following a 20.3% decrease between 1995 and 1996. The average dollar value per subscriber of transactions was approximately $1,164 between January and June 1998.[148]

43. *Overbuilding*. From 1995, when overbuild activity began to increase, to June 1998, competing franchises have been awarded covering 149 communities in 21 states with the potential to pass 7.2 million homes.[149] However, not all of the franchises awarded are currently in operation serving customers. Once a franchise is awarded, it takes 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 December 1998, Ameritech held 87 franchise awards, but of the communities included in those franchise areas, service is currently being offered in only 72

[141]John M. Higgins with Price Colman and Richard Tedesco, *AT&T Makes Local Call*, Broadcasting & Cable, Jun. 29, 1998, at 6.

[142]*Id*.

[143] This includes all systems bought and sold. *See* App. B, Tbl. B-8.

[144]A transaction recorded on this table may not actually take place, although it has been announced to the public. Most recorded transactions do take place, although a few each year fall through. *See* App. B, Tbl. B-8.

[145]*Id*.

[146]*Id*.

[147]*Id*.

[148]*Id*. *See also* paras. 149-151 *infra*.

[149]Paul Kagan Assocs., Inc., *Cable TV Franchising Competition, 1995-1998 Franchise Awards*, Cable TV Financial Data Book, Jul. 1998, at 67.

communities (i.e. parts or whole of the 87 franchise areas).[150] Ameritech's 87 franchise awards gives it the potential to pass 1.5 million homes, and Ameritech thus far has passed 1 million of those homes with its infrastructure.[151] As of December 1998, Ameritech had a total of 200,000 customers.[152] Given these figures, it appears that Ameritech has achieved penetration rates of approximately 10% within its total of 87 franchise areas. This compares with a current national cable penetration rate of 68%.[153] Because Ameritech has not completed construction in all 88 areas, however, its penetration rate in areas of direct competition is significantly higher. Other local exchange carriers ("LECs") also have yet to build out their entire awarded franchise areas.[154] Bell South offers service in parts or whole of nine of its 18 franchise areas.[155] GTE offers service in three of its 11 franchise areas, and SNET offers service in 12 cities within its Connecticut statewide franchise area.[156] More discussion about Ameritech video service provision and other LEC video efforts are discussed later in this *Report*.[157]

44. Among other smaller firms awarded competing franchises are RCN-BETG, McLeodUSA, Knology Holdings, Inc., Private Cable Ltd., Fiber Vision.[158] New overbuilds since our *1997 Report* include McLeodUSA's overbuild in Cedar Rapids, Iowa which competes with incumbent TCI.[159] The competitor offers cable video and audio channels and Internet access, while the incumbent offers cable video and audio channels,

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[150]Ameritech Corp., *Ameritech New Media Cable Franchises* (news release), Nov. 13, 1998.

[151]*Id*; *Ameritech Expands in Heartland*, Cableday, Nov. 5, 1998, at 2.

[152]Ameritech Corp., *ex parte* meeting with the Cable Services Bureau, Dec. 9, 1998.

[153]*See* App. B, Tbl. B-1.

[154]Paul Kagan Assocs., Inc., *Cable TV Franchising Competition, 1995-1998 Franchise Awards,* Cable TV Financial Data Book, Jul. 1998, at 67.

[155]Bell South Comments at 2-3.

[156]Telephone interview with Bill Shaw, Federal Docket Manager, GTE (Sept. 9, 1997); GTE Corp., http://www.gte.com/c/Prods/americas.html; SNET Corp. at http://www.snet.com/americast/amermain.htm; and *Conn. Regulators Unanimously Approve $4.4 Billion SBC-SNET Merger*, Comm. Daily, Sept. 3, 1998, at 2.

[157]*See* paras. 113-115 *infra*.

[158]Paul Kagan Assocs., Inc., *Cable TV Franchising Competition, 1995-1998 Franchise Awards,* Cable TV Financial Data Book, Jul. 1998, at 67.

[159]McLeodUSA, *Rate Card for Cedar Rapids, Iowa* (facsimile), Oct. 26, 1998; and TCI of Iowa, *Rate Card for Cedar Rapids, Iowa* (facsimile), Oct. 23, 1998. McLeodUSA's lowest-level offering is a 56-channel standard service for $26.90 a month. Subsequent non-premium channels can be added as separate 10-channel tiers for $5.00 each tier, or a la carte for $1.75-$2.75 each channel. Blocks of premium channels can be purchased, ranging $2.75 from for Encore Multiplex to $11.50 for HBO, HBO 2, HBO 3 & HBO Family. It offers a 95-channel service (which includes 15 movie channels) for $69.95. TCI's lowest-level offering is a limited basic service of 19 video channels and 2 guide channels for $8.95 a month. Non-premium channels can be added for $17.95 per month for an additional 27-channel tier or a la carte for $1.75 each channel. Premium services can be purchased individually, ranging from $1.75 for Encore to $11.50 for HBO or in bundles for collective discounts.

with plans to offer Internet access by the end of November 1998.[160] McLeodUSA is also expanding its fiber optic network in the area, over which it currently delivers local phone and long distance service in the city.[161] The company plans to target Des Moines, Iowa next.[162] In May, 1998, Knology Holdings, Inc. was awarded a franchise for 132,000 homes passed in Charleston, South Carolina, where it has started to compete with Comcast and Time Warner.[163] Knology already passes 68,000 homes in Columbus, Ohio; 82,000 homes in Montgomery Alabama; and 97,000 homes in Huntsville, Alabama where it competes with TCI, Charter, Comcast, Media Communications, and Wireless One.[164] Knology, similar to overbuilders RCN and McLeodUSA, offers its customers numerous services including video, telephony and high-speed Internet access services.[165]

45. Among municipal overbuilds since the *1997 Report* is Click!, a Tacoma, Washington, municipal overbuild that competes with TCI.[166] Areas where overbuilding is being considered currently include

[160]McLeodUSA, *Rate Card for Cedar Rapids, Iowa* (facsimile), Oct. 26, 1998; TCI of Iowa, *Rate Card for Cedar Rapids, Iowa* (facsimile), Oct. 23, 1998; and TCI of Iowa, *Telephone Call to TCI Cedar Rapids, Iowa Customer Service Department*, Oct. 28, 1998.

[161]McLeodUSA, *Rate Card for Cedar Rapids, Iowa* (facsimile), Oct. 26, 1998, and Joe Esterella, *TCI Faces Rival in Cedar Rapids,* Multichannel News, Jul. 13, 1998, at 29.

[162]Joe Esterella, *TCI Faces Rival in Cedar Rapids,* Multichannel News, Jul. 13, 1998, at 29.

[163]Knology Holdings, Inc. (facsimile), Nov. 2, 1998, at 6; Kent Gibbons, *Fast-growing Knology 'Scares' Cable*, Multichannel News, Jun. 22, 1998, at 6. Knology's Charleston, South Carolina, system is currently under construction. In the portions of the franchise area that have been passed by cable infrastructure, Knology offers service to its customers.

[164]Knology Holdings, Inc. (facsimile), Nov. 2, 1998, at 6; Kent Gibbons, *Fast-growing Knology 'Scares' Cable*, Multichannel News, Jun. 22, 1998, at 6. Knology's Panama City, Florida, and Augusta, Georgia, systems are currently under construction. In the portions of the franchise areas that have been passed by cable infrastructure, Knology offers service to its customers.

[165]Kent Gibbons, *Fast-growing Knology 'Scares' Cable*, Multichannel News, Jun. 22, 1998, at 6.

[166]*See* Click! Network Tacoma Power, *Rate Card for Tacoma, Washington* (facsimile), Oct. 13, 1998; TCI of Washington, *Rate Card for Tacoma, Washington* (facsimile), Oct. 14, 1998; Charles Paikert, *Tacoma Ready to Compete with TCI*, Multichannel News, Jul. 27, 1998, at 8; Newswire, *Tacoma's Click Network Debuts Video Service*, Cable World, Jul. 27, 1998, at 3. Click! offers a 17-channel broadcast only service for $5.95. This package includes 13 video channels, one on-screen guide, one bulletin board and two preview channels. Click also offers 7 additional video channels for a 24-channel (20 video channel total) broadcast-plus basic service for $9.95. Click!'s expanded basic service includes an additional 42 video channels for $23.50 a month (66 channels, 62 video channels in total). Premium services are sold a la carte or in packages. Installation is $29.95 for pre-wired homes and $39.95 for unwired. TCI offers a 22-channel video broadcast basic service, with one on-screen guide for $11.87. TCI's broadcast basic plus expanded basic service offers 38 additional video channels for $23.94. Premium services are sold in "value paks." Installation is $24.95 for a pre-wired home and $46.95 for an unwired home.

the town of Lebanon, Ohio,[167] and 11 communities in Northern Kentucky.[168] Other communities, such as Breckenridge and Moorhead, Minnesota, have rejected municipal overbuilds.[169] In Virginia, state legislators enacted legislation barring local municipal overbuilds capable of offering telecommunications services.[170] Municipal overbuilding is especially active in Iowa, where 10 communities have decided to overbuild and 12 communities are considering overbuilding.[171]

46. One indication that an overbuilt system may be in operation is the filing for determination of effective competition status, by the incumbent provider, with the Commission. Incumbent providers file such petitions when they believe that an overbuilder presents sufficient competition to meet one of the tests for effective competition in the rules.[172] Since 1995, 57 petitions for determination of effective competition status have been granted by the Commission specifically on the basis of overbuild competition. Each petition represents a franchise which may encompass numerous systems in several communities. For example, within these 57 petitions are 60 individual community units, identified by a Commission-assigned Community Unit Identification number ("CUID").[173]

47. As discussed later in this *Report*, a study of selected areas where incumbent cable operators face head-to-head effective competition are discussed later in this *Report*, shows that such competition often result lower prices, additional channels at the same monthly rate, improved services, or additional nonvideo

[167]Joe Esterella, *Ohio Town Set To Approve Muni Network*, Multichannel News, Jun. 1, 1998, at 18.

[168]Joe Esterella, *Ky. Towns Take Step Toward Mini Network*, Multichannel News, May 25, 1998, at 34.

[169]Joe Esterella, *Small Minn Community Rejects Overbuild*, Multichannel News, Apr. 20, 1998, at 14. Some attribute these defeats to a lack of education on the part of voters regarding the feasibility of a municipal overbuild or simply that there were no feasibility studies performed.

[170]Joe Esterella, *Va. Bill Forbids Mini Overbuilds*, Multichannel News, Mar. 23, 1998 at 36; *FCC Defends Decision In Abilene Preemption Case*, Comm. Daily, Nov. 3, 1998, at 1. Although there is a similar case in Texas whereby state law bars its cities from providing local telecommunications service, there has been no indication that Texas municipalities are experiencing difficulty attaining franchise awards for cable overbuilds.

[171]Joe Esterella, *Iowa Town Is 12th to OK TCI Overbuild*, Multichannel News, Feb. 1998, at 12, and Paul Kagan Assocs., Inc., *Cable TV Franchising Competition, 1995-1998 Franchise Awards*, Cable TV Financial Data Book, Jul. 1998, at 70.

[172]47 C.F.R. § 76.905

[173]47 C.F.R. § 76.5(dd). A "community unit" is a cable television system, or portion of a cable television system, that operates or will operate within a separate and distinct community or municipal entity (including unincorporated communities within unincorporated areas and including single, discrete incorporated areas). The Commission assigns each community an identification number, its Community Unit Identification Number ("CUID").

services.[174] However, in general cable rates have risen more than four times the rate of inflation.[175] According to the Bureau of Labor Statistics, between June 1997 and June 1998, cable prices increased by 7.3% compared to a 1.7% increase in the Consumer Price Index ("CPI"), which is used to measure general price changes.[176] A portion of these rate increases is attributable to capital expenditures for the upgrading of cable facilities, an increase number of video and nonvideo services offered, and increased programming costs. In addition, we note that there is evidence indicating that where direct competition exists it affects cable operators' pricing decisions.

[174]*See* paras. 208-231 *infra*.

[175]Bureau of Labor Statistics, *Consumer Price Index Data*, http://stats/bls.gov.

[176]*Id*.

5. Provision of Advanced Broadband Services

48. Cable operators are continuing with the deployment of advanced technologies including digital video, Internet access, and telephony services over their cable systems. As indicated earlier, upgrades to their system infrastructure are being made so that operators can provide quality and reliable new services. Operators also may be choosing to make upgrades to increase system capacity prior to commencing digital transmission or two way services. Additionally, cable systems previously providing only one-way ("downstream") analog service to the customer may require upgrading to eliminate poor electronic connections and other sources of interference prior to providing two-way ("upstream" and "downstream") data services. Two-way infrastructure is necessary for services such as two-way cable modems where data is transmitted entirely over cable and the provision of telephone services over cable wiring.[177]

49. *Digital Video Services*. As we reported last year, 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.[178] 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 sets.

50. TCI states that digital video is a widely appealing product that will achieve high penetration among its customers and it has made virtually all of its headends capable of delivering digitally compressed tiers.[179] At the end of July 1998, TCI had approximately 600,000 digital customers.[180] Cox is marketing its digital product in six major markets with plans to offer digital service in all nine of its major cluster markets by the end of 1998.[181] Cox's most penetrated digital market is Orange County, California, where it has achieved 10% penetration on a 252,000 subscriber system.[182] As of August, 1998, Comcast was offering digital service in Orange County and Sacramento, California; Greater Philadelphia, Pennsylvania; Baltimore, Maryland; parts of Middlesex, Union, and Essex Counties, New Jersey; Indianapolis, Indiana; and Southeast

[177]Digital video service can be provided without two-way infrastructure.

[178]*See 1997 Report*, 13 FCC Rcd at 1063 ¶ 46. 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. The picture quality provided by a 12:1 digital to analog compression ratio may be approximately equal to that provided by analog cable service, but is not as good as that provided by DBS systems' digital service or by lower compression ratios on cable systems.

[179]John M. Higgins, *Lessons Learned in Marketing Digital Cable,* Broadcasting & Cable, Jun. 28, 1998, at 44.

[180]Jessica Reif Cohen and Suk Han, *Tele-Communications -CI A*, Merrill Lynch, Oct. 7, 1998, at 2.

[181]Price Colman, *Digital Cable: When, Not If,* Broadcasting & Cable, May 4, 1998, at 42.

[182]John M. Higgins, *Lessons Learned in Marketing Digital Cable,* Broadcasting & Cable, Jun. 28, 1998, at 44; Charles Paikert, *Digital Picture Clears*, Multichannel News Supplement, Jun. 29, 1998, at 14A.

Michigan.[183] It was expected that Comcast will have 50,000-60,000 digital subscribers by the end of the year.[184]

51. As of June 1998, Time Warner and MediaOne had committed to smaller orders of digital set-top converter boxes, offering service in only a few selected markets.[185] In May, 1998, Time Warner began testing digital cable in its Austin, Texas, system.[186] Time Warner had expected to launch digital service in several major markets by December 1998.[187] As of December 1998, MediaOne was offering digital service to 152,000 homes passed in the suburban Detroit cities of Canton, Plymouth, Northville, and Southfield, Michigan.[188] There are 60,00 subscribers to MediaOne's digital services in the upgraded, 750 MHz system.[189] Analysts predict that digital penetration for six of the nation's largest MSOs will reach between 25%-50% within the next three years.[190]

52. *Internet and High-Speed Data Services.* Last year we reported thatInternet and other data can be transmitted faster over cable infrastructure than over most telephone systems.[191] Cable systems and cable modems are reported to be offering speeds up to 27 megabits-per-second ("Mbps") as compared with telephone company xDSL technologies that allow consumers to surf the Internet at speeds between 1.5 Mbps and 52 Mbps, though most users experience between only 3 to 10 Mbps for cable and between 1.5 and 7.1 for ADSL, the most widely used form of xDSL.[192] Telephone companies, however, are able to offer customers

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[183]Comcast Comments at 13; Comcast Corporation, *Comcast Reports Strong Third Quarter Results* (news release), Nov. 9, 1998.

[184]*Id*.; Jessica Reif Cohen and Suk Han, *Comcast Corp.*, Merrill Lynch, Oct. 8, 1998, at 2.

[185]Charles Paikert, *MediaOne Goes Digital: Detroit Is First*, Multichannel News, May 11, 1998, at 14, and Charles Paikert, *Digital Picture Clears*, Multichannel News Supplement, Jun. 29, 1998, at 14A.

[186]Time Warner Cable, *Time Warner Cable Begins Digital Satellite Feed* (news release), Oct. 13, 1998, at 1.

[187]Charles Paikert, *Digital Picture Clears*, Multichannel News Supplement, Jun. 29, 1998, at 14A.

[188]MediaOne Comments at 14: telephone interview with Bill Black, Director of Corporate Communications for the Midwest Region, MediaOne (Dec. 8, 1998).

[189]*Id*.

[190]Price Colman, Digital Cable: When, Not If, Broadcasting & Cable, May 4, 1998, at 42. The nation's six largest MSOs are: TCI, Cox, Comcast, Cablevision, Adelphia, and MediaOne.

[191]*See 1997 Report*, 13 FCC Rcd at 1064-1065 ¶ 47.

[192]Dr. Mahal Mohan, AT&T Corporation, *Broadband Access Technologies*, Nov. 6, 1998, at 4; Joe Esterella, *How Big A Threat? Cable Operators Are Nervously Downplaying the Emergence of ADSL Services From Telephone Companies*, Multichannel News Supplement, Jun. 29, 1998, at 28A; 3Com, *xDSL Local Loop Access Technology: Different Types of xDSL and How They Work*, http://www.3com.com/technology/tech_net/white_papers/500624.html. The acronym "xDSL" refers to a general class of digital subscriber line technologies. We report on ADSL specifically because there is a standard for it, and because it is the most feasible

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the ability to access the Internet, while simultaneously talking on the same telephone line.[193] Additionally, telephone companies, in association with xDSL technologies, utilize the "dedicated lines" that run from the telephone company customer's home to the central office, thus can nearly guarantee certain speeds of data transmission.[194] Cable networks use shared network infrastructure to the central office, thus the rate of speed can depend on the number of subscribers using the shared bandwidth at any given point in time.[195] Consumers also can purchase traditional "low-speed"[196] data access for the personal computer, which uses a traditional telephone modem and traditional telephone lines to transmit data, and which yields significantly slower data exchange rates.[197]

53. The current most important differences in cable and high-speed telephone company products are availability and pricing. A number of telephone companies are offering dedicated ADSL. For example, in Washington, DC, Philadelphia and Pittsburgh, Pennsylvania, and Hudson River communities in New Jersey, Bell Atlantic offers 7.1 Mbps downstream (to the customer) and 680 kilobits-per-second ("K") upstream (to the provider) for $109.95 or $189.95 a month depending on whether or not the customer also subscribes to Bell Atlantic's Internet service provider ("ISP") service. There is a one-time $99 connection fee for all service levels.[198] Most cable providers charge between $39.95 and $59.95 per month for service that may provide up

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[192](...continued)
for mass market deployment at this time. Other xDSL technologies include VDSL which is the fastest of xDSL technologies, performing at rates of 13 to 54 Mbps, but cannot function over sustained distances like ADSL.

[193]Joe Esterella, *How Big A Threat? Cable Operators Are Nervously Downplaying the Emergence of ADSL Services From Telephone Companies*, Multichannel News Supplement, Jun. 29, 1998, at 28A.

[194]Joe Esterella, *How Big A Threat? Cable Operators Are Nervously Downplaying the Emergence of ADSL Services From Telephone Companies*, Multichannel News Supplement, Jun. 29, 1998, at 28A; 3Com, *xDSL Local Loop Access Technology: Different Types of xDSL and How They Work*, http://www.3com.com/technology/tech_net/white_papers/500624.html.

[195]Joe Esterella, *How Big A Threat? Cable Operators Are Nervously Downplaying the Emergence of ADSL Services From Telephone Companies*, Multichannel News Supplement, Jun. 29, 1998, at 28A. Cisco Systems Corporation, *Cisco Launches "Built for Broadband" Program for New Media and Broadband Content Providers*, (news release), Dec. 1, 1998. Cisco systems is working on broadband solutions that would enhance a broadband network's scalability and bandwidth efficiency allowing for cable operators to better promise certain rates of data transmission on their systems.

[196]"Low-speed" Internet access does not go higher than 56.6 Kbps, while "high-speed" Internet access can range 3.1b Mbps to 10 Mbps.

[197]Dr. Mahal Mohan, AT&T Corporation, *Broadband Access Technologies*, Nov. 6, 1998, at 4; Tiger Direct.com, Mail Order Catalog, *Modems and Communications* at 129; and Starpower Communications, *Intenet Service by Erols*: *Unlimited Internet Access Accounts for $17.95*, (marketing release), Oct. 9, 1998. The highest rate of transfer allowed under the technology of a traditional modem using traditional telephone lines (plain old telephone service, "POTS"), is 56.6 K, but is often much slower. Many 56.6K telephone-line modems can be purchased for $39-$100. The cost of service with many Internet Service Providers is usually under $20 per month.

[198]Fred Dawson, *Bell Atlantic Will Join ADSL Fray in Fall,* Multichannel News, Jun. 8, 1998, at 10. The (continued...)

to 10 Mbps. Installation for cable modems ranges from no charge up to $499 in rare cases. Typical installation for cable Internet access is around $100.[199] Additionally, cable operators have been marketing their high-speed product longer than the telephone companies.[200]

54. In the last year, access to the Internet over cable generally has become easier. Most cable operators do not require video subscription as a condition of subscription to the Internet. Among the least costly options for Internet access, considering both cable operator and telephone company offerings, are WebTV[201] and Worldgate,[202] which provide Internet access and "hyperlinking" technology.[203] WebTV, which provides television content, as well as Web-surfing and hyperlinking capabilities, uses a special set-top box and keyboard, along with a television and a cable and a telephone connection to get "on-line."[204] WebTV Plus offers programming content not available to regular viewers, and requires additional equipment such as a personal computer ("PC") with a television tuner add-on card and Windows98.[205] WebTV still is working on

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[198](...continued)
service Bell Atlantic currently offers over ADSL that is closest in price to most cable Internet access services is Bell Atlantic's 640K downstream, 90K upstream service which costs $39.95 for subscribers to Bell Atlantic's ISP service and $69.95 per month for non-subscribers.

[199]*See* App. B, Tbl. B-9.

[200]Dean Takahashi and Stephanie N. Mehta, *Sprinting Behind Cable in Race to Offer Fast Data Access, Bells Back New Way,* The Wall Street Journal, Jan. 21, 1998, at B6.

[201]*See* http://www.microsoft.com; Charles Waltner, *Cable Nets Eye New Interactive Services*, Multichannel News, Feb. 23, 1998, at 38. WebTV is a Microsoft Corporation product. WebTV provides the user one or more local dial-in telephone numbers which enable the user to connect to the Internet through WebTV equipment and an Internet Service Provider ("ISP"). The ISP is the entity that translates requests for, and receipt of, Internet content using the Internet's common language: "Internet Protocol," or "IP." The end-user equipment required for WebTV costs between $199 and $300. WebTV Plus service costs $24.95 per month if the WebTV Network Service is used as the ISP and costs $14.95 a month if another ISP is used. The monthly cost of WebTV Classic is $19.95 a month if the WebTV Network Service is used as the ISP and $9.95 a month if another ISP is used.

[202]*See* http://www.wgate.com; Charles Waltner, *Cable Nets Eye New Interactive Services,* Multichannel News, Feb. 23, 1998, at 38; Jim Barthold, *Charter Launches WorldGate in St.Louis System*, Cable World, Apr. 27, 1998, at 128; John Burgess, *Web Firms Seek A Bigger Slice of TV Channels*, The Washington Post, Apr. 13, 1998, at A22. WorldGate Communications Inc. offers unlimited Internet-over-television access to the Web at 128 K (over twice the speed of a 56 K computer modem connection) as well as multiple e-mail addresses, and interactive services, operated through a remote control keyboard and set-top box. Worldgate cannot offer audio or video streaming. WorldGate has partnerships with 31 cable programmers for interactive content.

[203]Hyperlinking, in this context, is the technology that combines broadcast or cable television and telephone Internet connections to offer consumers access to supplemental information, one-button ordering, and the ability to play along with television shows, when applicable.

[204]*See* http://www.microsoft.com. WebTV uses cable network for downstream data transfer and telephone network for upstream data transfer.

[205]*See* http://www.microsoft.com; Bruce Haring, *Live! From `SNL'! It's Web TV!*, USA Today, May 5, 1998, at
(continued...)

a technology that would download video overnight for storage in the WebTV set-top box for "video-on-demand-style" service.[206] Worldgate offers Internet access through the standard digital or analog set-top box, already used by consumers, and has its computer processing centralized at the cable headend, thus the data transfer is entirely over cable infrastructure.[207] As such, Worldgate does not require its customers to purchase special equipment to get on-line.[208]

55. The most popular way to get online through cable infrastructure is the use of a cable modem for the personal computer.[209] The connection by cable modem is often less expensive if the customer is also a video subscriber, and the service received may or may not provide original content as well as a connection to the Internet. Virtually all of the major MSOs offer Internet access in some areas and they are expanding service areas to meet demand.[210] Currently, however, service is limited to select markets, such as Orange County, California, and various locales in Connecticut, Florida and New York.[211] Internet access through cable modems will continue to become more widely available as system infrastructure is upgraded, as discussed earlier in this section. Additionally, the commercial availability of cable modems may enhance MSOs' ability to market their Internet access services. Some MSOs, such as Cablevision, have chosen to provide Internet access only in areas where they can provide the access wholly over cable infrastructure instead of providing access with the downstream transfer of data over cable and the upstream path over telephone company wireline ("telco-return").[212] As of August 31, 1998, more than 15 million homes were passed by Internet access service through cable modem technology and there were approximately 300,000 subscribers.[213]

56. Last year, we reported that cable modem subscribers also may benefit from two services specially designed to increase data transfer speeds through local and regional networks, the @Home network

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[205](...continued)
3D. WebTV is a product of the Microsoft Corporation. Television tuner add-on cards cost about $100.

[206] Gary Arlen, *Cheap, Backlog, Terabytes of Dreams*, Multichannel News, Apr. 27, 1998, at 158. By 2000, WebTV hopes to provide set-top boxes with a minimum of 10 gigabytes ("Gigs") of hard-drive space and 120 hours of minimum quality video hours.

[207]*See* http://www.wgate.com

[208]*Id.*

[209]Cable modem Internet access services, however, require a PC with minimum specifications and a cable modem that, in some cases, is provided by or installed by the cable operator for a fee.

[210]*See* App. B, Tbl. B-9.

[211]*Id.*

[212]Telephone interview Conversation with Lee Pillaggi Schroeder, Director of Government Affairs and Regulatory Strategy, Cablevision Systems Corporation (Nov. 3, 1998).

[213]Kinetic Strategies, Inc., *Cable Modem Customer Count Tops 300,000*, Cable Datacom News, Sept. 1998 http://CableDatacomNews.com/sep98-1htm; Kevin Maney, *Net Access: Cable Modems Surge*, USA Today, Oct 5, 1998, at B1. Forrester Research estimates cable modems will have 700,000 users but the end of 1998.

and Road Runner.[214] These services are technologically different from other traditional dial-up on-line services. As we reported last year, @Home service provides its own local network. It has its own routing and caching (storage) servers, which allow the most frequently accessed material from its own content centers and from the Internet to be transferred from the source to these storage areas.[215] As of June, @Home had 147,000 subscribers across North America.[216] Service was available, or was in agreement to be available, for MSOs Bresnan,[217] Cablevision Systems,[218] Century,[219] Comcast,[220] Cox,[221]

[214]For a detailed explanation of how the @Home or RoadRunner networks operate, *see 1997 Report*, 13 FCC Rcd at 1066-1067 ¶ 49.

[215]*See 1997 Report*, 13 FCC Rcd at 1066-1067 ¶ 49.

[216]At Home Corporation, *@Home Network Reports Subscriber Base Grows to 210K Upgraded Homes Passed Increased to 10M* (news release), Oct. 13, 1998.

[217]*See* http://www.athome.net/home/availability/bresnan.html. A strategic alliance with Bresnan was announced June 1, 1998. Service is offered in upper Midwest markets including Midland and Bay City, Michigan.

[218]*See* http://www.athome.net/home/availability/cablevision.html. Service is available to Cablevision customers in Darien, New Canaan, Norwalk, Redding, Weston, and Westport, Connecticut.

[219]*See* http://www.athome.net/home/availability/century.html. A strategic alliance with Century was announced on May 7, 1998. Service is available in Los Angeles, California; and Colorado Springs, Colorado.

[220]*See* http://www.athome.net/home/availability/comcast.html. Service is available in Buena Park, Fullerton, Newport Beach, Placentia, Seal Beach, West Fullerton, California; LongBoat Key, Osprey, Nokomis, Sarasota, Siesta Key, and Venice, Florida; Chamblee, Dunwoody, and Dorabille, Georgia; Charleston, South Carolina; Chesterfield and Richmond, Virginia; and numerous locales throughout the states of Maryland, Michigan, New Jersey, and Pennsylvania.

[221]*See* http://www.athome.net/home/availability/cox_av.html. Service is available in numerous locales in Arizona, California, Oklahoma City, Nebraska, and Virginia.

InterMedia Partners,[222] Jones,[223] Marcus,[224] and TCI[225] customers, as well as Canadian MSOs Rogers and Shaw.[226] As of September 30, 1998, @Home had 210,000 cable modem subscribers, an increase of 43% from just three months prior.[227] As also reported last year, Road Runner Internet service did not build its own national network backbone and customer service infrastructure, rather it formed a partnership with MCI to provide dedicated national and regional backbone service connections to local cable system headends and a network operations center to monitor performance of local cable system data networks.[228] In addition, Road Runner is testing a second version with additional interactive features.[229] Road Runner, formed by Time Warner, reached an agreement in December 1997 to merge with MediaOne's Internet service MediaOne Express.[230] By June 1998, Microsoft and Compaq had invested a combined $425 million in that venture.[231] Road Runner provides service for Time Warner Cable and several MSO affiliates including MediaOne, Cablevision Systems Corp., Century Communications, and Fanch Communications for a combined Road Runner/MediaOne Express subscribership of 70,000.[232]

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[222]*See* http://www.athome.net/home/availability/intermedia.html. Service is available in Greensville, Spartanburg, South Carolina; and Brentwood, Murfreesboro, Rutherford, Nashville, Williamson, and Wilson County, Tennessee.

[223]*See* http://www.athome.net/home/availability/jones.html. A strategic alliance with Jones was announced Jun. 30, 1998, for service in the Washington, D.C., Metropolitan area.

[224]*See* http://www.athome.net/home/availability/marcus.html. Service is available in numerous locales in Texas.

[225]*See* http://www.athome.net/home/availability/tci.html. Service to TCI customers also is available in numerous locales throughout the states of California, Connecticut, Illinois, Iowa, Louisiana, Michigan, Pennsylvania, Virginia, and Washington.

[226]*See* App. B, Tbl. B-9. *See also* Michael Harris, *Cable Modem Commercial Launches and Trials in North America*, Kinetic Strategies, May 15, 1997, http://CableDatacomNews.com/cmic7.htm; *The High Velocity Internet Service*, http://www.athome.net/home/availability.html.

[227]At Home Corporation,*@Home Network Reports Subscriber Base Grows to 210K Upgraded Homes Passed Increased to 10M* (news release), Oct. 13, 1998.

[228]*See 1997 Report*, 13 FCC Rcd at 1067 ¶ 49.

[229]Newswire, *Road Runner Testing 2.0 Version in Portland*, Cable World, Jul. 27, 1998, at 3. Road Runner version 2.0 offers customized audio and video content, local programming, Yack! chatroom schedules, personalized Web pages, commercial e-mail access, and content providers *AccuWeather, Epicurious, and Entertainment Weekly*.

[230]Michael Harris, *Cable Internet Service Providers and Systems Integrators*, Kinetic Strategies, Sept. 29, 1998, at http://CableDatacomNews.com/cmic5.htm; Alan Breznick, *Modem Count*, Cable World, Apr. 20, 1998, at 28.

[231]*Id*.

[232]*See* App. B, Tbl. B-9; Alan Breznick, *Modem Count*, Cable World, Apr. 20, 1998, at 28.

57. Since our last report, a formal path of certification has been established for cable modem suppliers to obtain an "interoperability seal" for their high-speed data delivery devices under the cable modem standard, DOCSIS (Data Over Cable Service Interface Specification).[233] Originally only one among many proposed standards, DOCSIS started to emerge as the leading option for a cable modem standard in late 1997.[234] Between July 1997 and May 1998 vendors tested prototypes of the equipment.[235] In March 1998, the International Telecommunications Union approved DOCSIS.[236] In June, 1998, CableLabs hosted a series of "Interoperability and Certification Wave" vendor conclaves to initiate the final, "certification and commercialization" phase of a cable modem standard.[237] The formal seal of DOCSIS compliance will be granted by a Certification Board made up of five MSO representatives and a liaison from CableLabs.[238] The goal of all involved parties is to have a standard approved by the end of 1998, and for interoperable modems to become commercially available shortly thereafter. Currently, cable modems are commercially available in some areas, but these modems may not be technically compliant with DOCSIS standards, and may not be interoperable with modems that will appear after DOCSIS certification. Equipment issues are discussed more fully in the technical advances section below.

[233]Cable Television Laboratories, Inc. ("CableLabs"®), *Cable Industry Formalizes DOCSIS Modem Certification Plan* (news release), Nov. 17, 1997; Broadband Extra, *DOCSIS Certification*, Cable World, Jul. 27, 1998, at 39; Michael Harris, *Cable Modem Standards and Specifications*, Kinetic Strategies, Sept. 29, 1998, http://CableDatacomNews.com/cmic3.htm. In December 1996, a group of cable operators, dissatisfied with the progress being made for a cable modem standard by the Institute of Electronic and Electrical Engineering ("IEEE"), joined together as the Multimedia Cable Network System Partners Ltd. ("MCNS"), and issued a "Request for Proposal" ("RFP") that resulted in the development of DOCSIS (Data Over Cable Service Interface Specification).

[234]CableLabs®, *Five Modem Makers' Systems Considered for Cable Data Specifications* (news release), Sept. 23, 1996; CableLabs®, *Cable Industry Seeking Comments on Status Monitoring Specification* (news release), Oct. 7, 1996; CableLabs®, *Cable Industry Issues Specification for High-Speed Delivery* (news release), Dec. 11, 1996.

[235]CableLabs®, *Cable Industry Formalizes DOCSIS Modem Certification Pla*, (news release), Nov. 17, 1997; Broadband Extra, *DOCSIS Certification*, Cable World, Jul. 27, 1998, at 39.

[236]CableLabs®, *International Telecommunications Union Approves DOCSIS Modem Standard*, (news release), Mar. 19, 1998.

[237]Broadband Extra, *DOCSIS Certification*, Cable World, Jul. 27, 1998, at 39.

[238]*Id.*

58. *Telephone Services Offered by MSOs*. As we reported last year, cable telephony[239] requires sizeable and expensive upgrades and presents a number of technical obstacles.[240] This year, some cable operators have publicly expressed interest in Internet Protocol Telephony ("IP telephony") as a potential alternative to cable telephony.[241] An IP telephony voice call starts out similar to a cable telephony voice call in that both begin with special equipment that connects a household's twisted pair infrastructure and cable infrastructure to one another. The difference between the technologies is that cable telephony 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 Internet Protocol processing. IP telephony treats voice telephone calls like data are treated 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.[242] As a result calls made using IP telephony technology may encounter choppiness and delays ("latency"). Today, many features, such as call waiting, are not part of the package of IP Telephony, but will be available to residential customers within the next one to two years.[243] The Internet itself is not designed to provide circuit switched connections, such as those now used by switched telephone networks.[244] Although there are significant technological difficulties that need to be worked out with IP telephony, many MSOs are considering this approach to replace current cable telephony technology. TCI, in conjunction with AT&T, is currently the leading proponent of IP telephony.[245] The cable industry's approach

[239]John M Higgins, *IP Telephony: Does AT&T Have its Number?*, Broadcasting & Cable, Jul. 6, 1998, at 36. Cable telephony is the process by which voice is transferred between the cable headend and the cable service area node via fiber-optic network, between the node and the home via coaxial cable, and is then converted by special equipment installed at the customer's home, to the home's twisted pair wiring, where the customer plugs a standard telephone into the traditional telephone wall-outlet. At the headend, the telephone call is processed either by the cable operator via standard circuit switching technology, or is sent to the incumbent local exchange provider ("ILEC") for circuit switch technology. The only case where a telephone call may be transmitted entirely over cable infrastructure is if both callers are subscribers to the same cable company, in which case, the cable operator routes the call through its own main office without having to send the call out over common carrier network.

[240]*See 1997 Report*, 13 FCC Rcd at 1067 ¶ 51.

[241]The Internet is an international computer network consisting of millions of individual networks joined to exchange data by using a standard format known as Internet Protocol ("IP").

[242]"The path of least resistance" is the fundamental theory on which the Internet was built. Invented for the sole purpose of discovering a way to get 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 will take any path that does not resist transfer. The path of least resistance is not always the shortest path, but for data, it is the most reliable path for the mass transfer of data.

[243]Tom Wolzien, Tod A. Jacobs, and Carl E. Walker, *"Internet Protocol" Telephony: Feasible and Affordable for AT&T/TCI*, Bernstein Research, Jul. 13, 1998, at 23; John M Higgins, *IP Telephony: Does AT&T Have its Number?*, Broadcasting & Cable, Jul. 6, 1998, at 36.

[244]Tom Wolzien, Tod A. Jacobs, and Carl E. Walker, *"Internet Protocol" Telephony: Feasible and Affordable for AT&T/TCI*, Bernstein Research, Jul. 13, 1998, at 23.

[245]John M Higgins, *IP Telephony: Does AT&T Have its Number?*, Broadcasting & Cable, Jul. 6, 1998, at 36; Tom Wolzien, Tod A. Jacobs, and Carl E. Walker, *"Internet Protocol" Telephony: Feasible and Affordable for*

(continued...)

to eliminate latency in IP telephony is to eventually build a backbone network that is separate from the general public Internet backbone.[246] IP telephony is currently being commercially offered on a small scale by providers such as AT&T, Sprint, Qwest Communications, NetWorks Telephony Corporation, Vocal Tec, and numerous small IP Telephony Service Providers ("IPTPs"), but for the most part remains in the development and trial stage, with larger scale deployments expected next year.[247]

59. Last year, we reported that numerous MSOs were offering commercial cable telephony, and we indicated the specific locations where service was being offered.[248] The number of locales where MSOs offer cable telephony has increased in the last year, and it is available to a large number of customers in many markets. For example, Cox is offering "Cox Digital Telephone" in parts of five major markets.[249] MediaOne offers "MediaOne Digital Telephone" in parts of the Los Angeles and Atlanta metropolitan areas.[250] Additional market launches are planned since the number of homes taking the service compared to the number of homes passed by the service ("penetration") has been ranging 10%-19%, and profit margins for cable telephony are in the range of 40%.[251] Cablevision Systems Corporation has commercial telephone operations on Long Island, New York and in several Connecticut markets. It has more limited residential versions on Long Island, but has plans for widespread launches to 200,000 homes on Long Island and locales in Connecticut by the end of the year.[252] Jones Intercable has had continued success with its rollout in the Washington, D.C., metropolitan area and plans to expand service

[245](...continued)
AT&T/TCI, Bernstein Research, Jul. 13, 1998, at 23.

[246]Tom Wolzien, Tod A. Jacobs, and Carl E. Walker, *"Internet Protocol"Ttelephony: Feasible and Affordable for AT&T/TCI*, Bernstein Research, Jul. 13, 1998, at 23.

[247]*See* www.ipxstream.com/GIP/providers/index.html#itsp.

[248]*See 1997 Report*, 13 FCC Rcd at 1068-1069 ¶ 51.

[249]Orange County, California, Omaha, Nebraska, Meriden, Connecticut, Phoenix, Arizona, and San Diego, California; Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29, 1998, at 24A; and Monica Hogan, *Cox Rings Up Two More Phone Markets*, Multichannel News, Sept. 14, 1998, at 16.

[250]Jessica Reif Cohen and Suk Han, *Media One Group*, Merrill Lynch, Oct. 8, 1998 at 2.

[251]Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29, 1998, at 24A; Greg Braden, *Telephony Fulfills Broadband's Promise*, Multichannel News, Jun. 22, 1998, at 7; Jessica Reif Cohen and Suk Han, *Media One Group*, Merrill Lynch, Oct. 8, 1998, at 2.

[252]Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29, 1998, at 24A; Joe Esterella, *Tristani: Cable Still Best Telephony Competitor*, Multichannel News, May 11, 1998, at 114.

within the region.[253] Jones has attained 27% penetration among the 28,000 homes it passes with telephone service in the Washington, D.C., metropolitan area.[254] TCI continues to provide cable telephony in Arlington Heights, Illinois and Hartford, Connecticut, but is not planning future launches.[255] Time Warner terminated its commercial telephony launch in Rochester, New York, with no plans to launch elsewhere.[256] As of July 1998, Time Warner does not offer local phone service to any of its customers.[257]

60. *Multi-Service Offerings.* As discussed above, numerous MSOs are offering customers, in many of their service areas, more than standard video services. Multi-service offerings and bundling[258] services for sale seem to enhance subscription to alternative services offered by cable companies.[259] Digital audio and digital, high-resolution video, as well as telephony and Internet access through cable modems are becoming high demand services that cable has the bandwidth capability to offer, depending on the capacity of the particular system. Indications are that customers value receiving these services through "one-stop-shopping." For example, many large MSOs have found that bundling increases penetration of video and of new services.[260] MSOs, such as Cox, MediaOne, Jones, and Cablevision, indicate that bundling their services increases consumer awareness, interest, and ultimately penetration of services while saving on administrative and marketing costs.[261] Many of the small overbuilders such as McLeodUSA, RCN, and Knology started by offering video programming as part of bundled services.[262] Many of these firms depend on their ability to offer multiple bundled services in discounted packages as a way to attract customers.

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[253]Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29, 1998, at 24A.

[254]Jones has 7,500 cable telephone customers. Jones defines cable telephone as facilities based telephony using separate fiber network, leased or owned by the company itself. Telephone service is limited to MDU's. Telephone interview with Drew Sheckler, Senior Vice President of Operations, Jones Communications (Oct. 14, 1998).

[255]Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29, 1998, at 24A.

[256]*Id*.

[257]John M. Higgins, *Levin Open to Telephone Deal*, Broadcasting & Cable, Jul. 20, 1998, at 13; John Higgins, *Time Warner Disconnects Telephone Deal*, Broadcasting & Cable, Jul. 13, 1998.

[258]As discussed here, bundling is the situation when a service operator offer numerous services (video, telephone, Internet access) sometimes offered entirely over its own network, sometimes offered over a combination of its own network and leased network, to provide customers "one-stop-shopping," and discounts for taking multiple services.

[259]Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29 at 24A. "Bundled discounts are a key, according to Drew Sheckler, Senior Vice President of Operations in the D.C. region at Jones Communications."

[260]Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29, 1998, at 24A. "People are responding to the convenience of one-stop-shopping, says Drew Sheckler of Jones Intercable."

[261]Kent Gibbons, *Back from the Dead*, Multichannel News Supplement, Jun. 29, 1998, at 24A; Greg Braden, *Telephony Fulfills Broadband's Promise*, Multichannel News, Jun. 22, 1998, at 71.

[262]*See* paras. 43-47 *supra* (discussion of specific overbuilds).

B. Direct Broadcast Satellite Services

61. 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 service. Each DBS operator transmits its programming services to subscribers from satellites located at specific orbital locations.[263] DirecTV, United States Satellite Broadcasting ("USSB"),[264] and EchoStar (marketed as the DISH Network) currently offer DBS video programming. In addition, there are several companies, licensed to operate a DBS system who have yet to begin service.[265] Primestar is offered by means of a medium powered fixed satellite service ("FSS") that shares many of the attributes of DBS operators, but requires a larger antenna and has lower channel capacity.[266] All of the above services offer various packages of programming for various monthly fees. DirecTV offers more than 200 channels. USSB, usually ordered in concert with DirecTV's service, offers 20 premium movie channels and access to pay-per-view events. EchoStar offers 240 channels of programming.[267] Primestar offers 160 channels of programming.

62. *Subscribership.* DBS continues to represent the single largest competitor to cable operators and DBS subscribership continues to show strong growth. The four DBS providers furnished programming to more than 7.2 million subscribers as of June 1998.[268] This is an increase of more than 2.2 million

[263]For specific information on these orbital locations, *see 1997 Report*, 13 FCC Rcd at 1192, App. C, Tbl. C-1.

[264]DirecTV's parent corporation, Hughes, has reached an agreement to acquire USSB, but the agreement has not closed. Hughes Electronics, *Hughes to Acquire USSB* (press release), Dec. 14, 1998.

[265]Continental Satellite Corporation, Dominion Video Satellite, Inc., and ASkyB, a joint venture of News Corporation and MCI, each hold licenses but have not launched any satellites. (EchoStar has, however, reached an agreement to acquire ASkyB's satellite assets, but the agreement has not been finalized. EchoStar Communications Corp., *EchoStar Communications Corporation Announces Agreement to Acquire Assets From News Corporation, MCI* (press release), Nov. 30, 1998.) Tempo, a wholly owned subsidiary of TCI Satellite Entertainment, launched a satellite in March 1996. (*See* Rick Westerman and Edward T. Hatch, "Table 3: DBS Industry Licensed Number of Transponders," *Direct Broadcast Satellite, Outlook*, UBS Securities, Mar. 4, 1997, at 9.) In addition, the Commission has authorized Televisa International, LLC., to offer service to some subscribers in the United States from Mexico's Solidaridad II satellite, signaling the first stages of direct competition for the United States DTH market from foreign companies. (*See In the Matter of Televisa International, LLC., Application for Blanket License for Receive-Only Earth Stations in the Fixed Satellite Service for Direct-to-Home Subscription Television Service*, File No. 330-DSE-L-97, Call Sign E970096, Order and Authorization, DA 97-1758 (rel. Aug. 18, 1997).)

[266]In the *1998 Report*, as in previous years, we include a discussion of Primestar Partners, L.P. ("Primestar"), a medium-powered Ku-band Fixed Satellite Service ("FSS"), together with our high-powered Ku-band DBS providers, DirecTV, USSB and EchoStar, as DBS providers. Unless otherwise noted, our discussions of attributes of DBS providers includes Primestar. *See* para. 77 *infra*.

[267]We note that EchoStar's channel capacity is derived from multiple orbital slots, whereas DirecTV's/USSB's capacity is derived from one slot.

[268]Current subscriber numbers from SkyREPORT.Com, http://www.skyreport.com/dth_us.htm. USSB subscribers are not reported as a separate group by SkyREPORT. DirecTV and USSB are complimentary services

(continued...)

subscribers since June 1997, or nearly 43%.[269] In addition, industry reports state that 2.2 million of the 3.6 million net new MVPD subscribers in 1998, or almost two thirds, are choosing DBS.[270] The Strategis Group projects that DBS subscribership will grow to 20 million by 2003, with its share of the multichannel video market growing to 25%.[271] *SkyReport*, a trade publication that tracks DBS subscriber growth, estimates that DBS will have 15.2 million subscribers by 2002.[272]

63. *DBS versus Cable*. Both DBS and cable offer video programming to subscribers for a monthly fee along with premium and pay-per-view services. DBS subscribers continue to report higher levels of customer satisfaction, 30% higher than the cable industry average, according to one recent survey.[273] DBS subscribers have reported that the main 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 National Football League or National Basketball Association packages. Some of these advantages, however, may diminish as cable operators roll out digital services that allow cable operators to match DBS operators in number of channels and signal quality. Consumers continue to report that the biggest drawbacks of DBS service are the difficulties associated with the provision of local broadcast signals,[274] and the upfront cost of equipment and installation.[275] As with DBS' advantages, however, these disadvantages vis-a-vis cable have been mitigated somewhat over the past year: equipment and installation prices are dropping, and DBS providers are working toward solutions by which they can supply local channels. It appears that, over time, the differences between cable and DBS will continue to diminish. Currently, it also appears that DBS represents a substitute for some consumers, especially those with access to local broadcast stations. As DBS equipment prices continue to drop and especially if DBS operators are able to offer local broadcast stations, DBS may become a closer substitute to cable for an increasing number of consumers.

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[268](...continued)
because subscribers use the same equipment to receive each service and the services offer different programming. According to SkyREPORT, only a small portion of USSB subscribers do not also receive DirecTV. SkyREPORT, *DTH Subscribers*, Sept. 1997, at 4.

[269]SkyREPORT.Com at http://www.skyreport.com/dth_us.htm.

[270]Paul Kagan Assoc., Inc., *Marketing New Media*, Oct. 19, 1998, at 1.

[271]Minal J. Damani and Jennifer E. Sharpe, *U.S. DBS Marketplace: 1998*, The Strategis Group, Jul. 1998, at 6.

[272]*Handicapping the Digital Race*, SkyREPORT, Feb. 1998, at 1.

[273]J.D. Power and Assocs., *Satellite Providers Continue to Dominate Customer Satisfaction in Pay TV Industry* (press release), Sept. 9, 1998.

[274]Broadcast television, delivered either over-the-air or via an MVPD, remains the primary source of video programming (55% share of prime time viewing) for most Americans. *See* para 96 *infra*. A survey of people who "investigated" DBS systems but did not buy revealed that 55% did not buy a DBS system because of a lack of local broadcast networks. *Satellite 101*, presentation to FCC Cable Services Bureau by Harry W. Thibedeau, Manager of Industry Affairs, SBCA, Aug. 25, 1998.

[275]For further discussion, *see 1997 Report*, 13 FCC Rcd at 1071-72 ¶¶ 56-7. *See also* para. 73 *infra*.

64. In the *Notice*, we sought information for each type of MVPD that described the service provided (e.g., 50 channels of video programming, Internet access) and the average monthly cost to the customer of each service (e.g., video, data) provided by the MVPD. We asked commenters to provide separate cost figures for each type of service offered by the MVPD. We sought information that would reflect: (a) the up-front costs for equipment and installation for each service; (b) the costs of adding each service to more than one television set; (c) prices for the various program options and packages offered by each service; (d) the costs of receiving local broadcast stations along with each service; and (e) any other information relevant to consumer considerations when selecting among services. Further, we sought comment on the appropriate method for comparing the services and costs of different MVPDs. For example, for services that require the purchase, rather than the rental, of equipment, should the costs of equipment be amortized over a period of time? What is the appropriate time period? Are there other factors that we should consider in making such comparisons? Commenters did not provide information that would allow comparisons of the costs to consumers of subscriber to various MVPDs. We recognize that such comparisons are difficult to the the wide range of prices for equipment and the variability of programming packages offered and their prices. We also observe that some providers are now offering free equipment along with long term commitments to purchase programming, making such comparisons particularly difficult.

65. *Availability of Local Broadcast Stations*. In 1988, Congress passed the Satellite Home Viewer Act ("SHVA").[276] In the Satellite Home Viewer Act, Congress granted a limited exception to the exclusive programming copyrights enjoyed by television networks and their affiliates because it recognized that some households are unable to receive network station signals over the air.[277] The exception is a narrow compulsory copyright license that direct-to-home (DTH) satellite video providers[278] may use for

[276]17 U.S.C. § 119.

[277]H.R. Rep. No. 103-703, at 5 (1994) (Congress enacted the SHVA so that "households that cannot receive over-the-air broadcasts or cable can be supplied with television programming via home satellite dishes"); S. Rep. No. 103-407, at 5 n.2 (1994) (the restriction on satellite delivery of network signals "actually refers to those geographic areas where subscribers are unable to receive the signal of a particular network"); H.R. Rep. No. 100-187(I), at 14-15, 18, 26, *reprinted in* 1988 U.S.C.C.A.N. 5638 (1988) ("The distribution of network signals is restricted to unserved households; that is, those that are unable to receive an adequate over-the-air signal.").

[278] More specifically, the license is available to satellite carriers defined as follows:

> The term "satellite carrier" means an entity that uses the facilities of a satellite or satellite service licensed by the Federal Communications Commission and operates in the Fixed-Satellite Service under part 25 of title 47 of the Code of Federal Regulations or the Direct Broadcast Satellite Service under part 100 of title 47 of the Code of Federal Regulations, to establish and operate a channel of communications for point-to-multipoint distribution of television station signals, and that owns or leases a capacity or service on a satellite in order to provide such point-to-multipoint distribution, except to the extent that such entity provides such distribution pursuant to tariff under the Communications Act of 1934, other than for private home viewing.

retransmitting signals of a defined class of television network stations[279] "to persons who reside in unserved households."[280] The SHVA also contains a "superstation" compulsory copyright license with no geographic restrictions.[281] The term "unserved household," with respect to a particular television network station is defined by SHVA to mean 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.[282]

66. In August 1997, the Copyright Office issued a report which, among other things, recommended that Congress amend the Satellite Home Viewer Act to eliminate the Grade B signal standard and the 90 day waiting period.[283] In 1998, two bills were introduced in Congress to make changes in the SHVA.[284] No Congressional action, however, was taken on this issue, and the two bills expired at the end of the Congressional term.

67. DirecTV and Primestar currently offer retransmission of distant broadcast signals to unserved households through third party satellite program packagers -- PrimeTime 24 and Netlink, respectively. USSB does not offer a package of distant signals to its subscribers. Most USSB subscribers, however, receive

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[279]Under 17 U.S.C. § 119(d)(2), the term "network station" means:

> (A) a television broadcast station, including any translator station or terrestrial satellite station that rebroadcasts all or substantially all of the programming broadcast by a network station, that is owned or operated by, or affiliated with, one or more of the television networks in the United States which offer an interconnected program service on a regular basis for 15 or more hours per week to at least 25 of its affiliated television licensees in 10 or more States; or
>
> (B) a noncommercial educational broadcast station (as defined in section 397 of the Communications Act of 1934).

[280]17 U.S.C. §§ 119(a)(1) and (d)(9).

[281]*Id.*

[282]17 U.S.C. § 119(d)(10).

[283]*See* U.S. Copyright Office, *A Review of the Copyright Licensing Regimes Covering Retransmission of Broadcast Signals* ("*Copyright Office Report*"), Aug. 1, 1997.

[284]S. 1720 and H.R. 3210.

DirecTV and can request its package of network signals.[285] EchoStar does not contract with an outside provider but, instead, offers its subscribers its own "DISH" branded packages of east coast and west coast signals.[286] In addition, EchoStar states that it now offers local-into-local service to unserved households in 13 markets: Pittsburgh, Miami, Denver, Salt Lake City, Phoenix, San Francisco, Boston, New York City, Washington, D.C., Atlanta, Chicago, Dallas, and Los Angeles. These subscribers receive their local ABC, CBS, NBC, and Fox affiliates, and the national feed of PBS.[287] EchoStar plans to add markets, eventually serving 20 local markets.[288] EchoStar subscribers who want either form of broadcast signals must purchase a second dish, but do not need any other additional equipment.

68. Recently, this practice of retransmitting network broadcast stations by DBS has become the subject of civil litigation. Network broadcasters filed suit against PrimeTime 24 in Florida, North Carolina, and Texas, alleging that PrimeTime 24 was supplying network broadcast signals to DBS subscribers who were not "unserved" in violation of the SHVA.[289] Thus far, rulings have been issued in the United States District Court for the Southern District of Florida, involving the local CBS and Fox affiliates and in a Raleigh, North Carolina federal district court, involving the local ABC affiliate. In both cases, the courts found that PrimeTime 24 had violated the SHVA. In the Florida case, the court, finding evidence that violations of the SHVA had taken place, issued a preliminary, nationwide injunction ordering PrimeTime 24 not to deliver CBS or Fox television network programming to any customer that does not live in an unserved household. The court initially provided PrimeTime 24 with 90 days to comply with the preliminary injunction, which applies only to subscribers who signed up with PrimeTime 24 after March 11, 1997 (the day the plaintiffs filed their lawsuit). The parties subsequently and jointly agreed to an extension of the compliance date to February 28, 1999, and the court approved the parties' agreement on October 6, 1998. If enforced, the preliminary injunction could result in the termination of network signals to an estimated 700,000 to one million

[285]USSB and DirecTV encourage their subscribers to use a third option for reception of local broadcast signals: use of a high quality over-the-air antenna and an A/B switch integrated with the DBS system. *See, e.g.*, U.S. Satellite Broadcasting, http://www.ussb.com/Why.html*; DBS Future Said To Depend on Local TV Signals*, Comm. Daily, Sept. 24, 1998, at 6.

[286]EchoStar had previously contracted with PrimeTime 24, but substituted its own service in July 1998. EchoStar Communications Corp., *Dish Network Offers New Improved Broadcast Network Programming Packages* (press release), Jul. 20, 1998.

[287]Qualifying subscribers in the thirteen local markets listed above can receive, for different monthly fees, any combination of their own local broadcast stations, the DISH NETS East package, and/or the DISH NETS West package. Qualifying subscribers not in the thirteen local markets listed above can receive, for different monthly fees, any combination of the DISH NETS East package, and/or the DISH NETS West package. EchoStar Communications Corp., *DISH Network Launches DISH NETS Local Channels in Pittsburgh* (press release), Sept. 15, 1998.

[288]EchoStar Communications Corp., *Dish Network is the Only One!* (press release), Jan. 8, 1998.

[289]*For Miami, see* 1998 WL 310683 (S.D.Fla.). *For Raleigh, see* 1998 WL 544286 (M.D.N.C.) *and* 1998 WL 544297 (M.D.N.C.). *For Texas, see Kannan Communications, Inc. v. Primetime 24 Joint Venture*, No. 2-96-CV-086 (N.D. Tex.). No ruling has been issued in the Texas case.

subscribers.[290] A permanent injunction could end satellite network service to as many as 2.2 million subscribers.[291]

69. In the Raleigh case, the federal district court also ruled against PrimeTime 24.[292] A permanent injunction followed on August 19, 1998.[293] Similar to the Miami ruling, the court found that the SHVA defines unserved household and Grade B using strictly objective standards. PrimeTime 24 has provided network services to as many as 35,000 households in the ABC affiliate's Raleigh/Durham market.[294] At the time of the court's decision, PrimeTime 24 continued to serve more than 9,000 subscribers within the affiliate's Grade B contour.[295]

70. Subsequently, the NRTC, an investor in DirecTV and an MVPD serving home satellite dish ("HSD") customers, filed an emergency petition with the Commission urging that it adopt a new standard of "Grade B intensity" to be used to define unserved households in the SHVA.[296] The effect of the NRTC proposal would be that many viewers who are now deemed able to receive a local network signal would be redefined as unserved households eligible to receive distant network signals from their satellite service providers. EchoStar, in a separate petition, asks the Commission to establish a more accurate way to predict and measure whether a household receives a signal of Grade B intensity as currently defined.[297] The Commission issued an NPRM on November 17, 1998 in response to these petitions.[298] EchoStar also has filed

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[290]Letter from William E. Kennard, Chairman, Federal Communications Commission, to Senator John McCain and Representative Tom Bliley, Sept. 4, 1998 (figures based on publicly available information).

[291]*Id.* As noted, the court chose the preliminary injunction's March 11, 1997 date because that is when CBS and Fox filed their lawsuit against PrimeTime 24. If the court issues a permanent injunction, the 700,000 to one million subscribers affected by the preliminary injunction will increase to include PrimeTime 24's subscribers before March 11, 1997. While not all of these subscribers are illegal, this could be an additional 1.5 million subscribers, thus raising the total subscribers potentially affected by the Miami court orders to 2.2 million.

[292]*ABC, Inc. v. PrimeTime 24, Joint Venture*, __ F.Supp.2d __, 1998 WL 544286 (M.D. N.C., July 16, 1998) (Case No. Civ. A. 1:97CV00090).

[293]*ABC, Inc. v. PrimeTime 24, Joint Venture*, __ F.Supp.2d __ , 1998 WL 544297 (M.D. N.C., Aug. 19, 1998) (Case No. Civ. A. 1:97CV00090) ("*ABC v. PrimeTime 24,* Permanent Injunction").

[294]*ABC v. PrimeTime 24*, Permanent Injunction, 1998 WL 544297, *2; *ABC v. PrimeTime 24*, Court Opinion, 1998 WL 544286, *9.

[295]1998 WL 544297, *2, *6; 1998 WL 544286, *9.

[296]Federal Communications Commission, *Office of Public Affairs, Reference Operations Division, Petitions for Rulemaking Filed*, FCC Public Notice (Aug. 5, 1998), Report No. 2290. The NRTC also asked for this determination in its comments. *See* NRTC Comments at 8.

[297]Federal Communications Commission, *EchoStar Communications Corporation Files a Petition for Declaratory Ruling and/or Rulemaking*, FCC Public Notice (Aug. 26, 1998), DA No. 98-1710.

[298]*Network Signals to Unserved Households for Purposes of the Satellite Home Viewer Act - Part 73 Definition*
(continued...)

suit in Colorado Federal court against the four major networks and their affiliates, seeking a declaration that EchoStar's transmission of distant network signals is legal under the SHVA.[299] Finally, in November, ABC, CBS, Fox, and NBC filed suit against EchoStar in the Miami District Court, claiming that EchoStar's DISH NETS offerings are an effort to circumvent the previous Miami ruling against PrimeTime 24.[300]

71. The litigation, petitions, and legislative proposals do not, however, address the reception of local signals by satellite subscribers in their own local stations markets. According to the Copyright Office, the retransmission of local signals by satellite carriers is not specifically addressed in the SHVA "because the technology did not exist to make such local retransmission possible [but] if satellite carriers could retransmit the signals of local network stations to subscribers, the concern that led to the unserved household provision would theoretically become resolved."[301] Technological issues, however, may make nationwide local-into-local service infeasible. The *SHVA NPRM* seeks comment on this issue.[302] While cable systems are terrestrially-based and designed to deliver both local and national programming to discrete local markets, DBS systems deliver their programming on a national basis from orbital locations that cover the entire United States. In addition, there are over 1500 television broadcast stations in the U.S. and DBS providers may not have the channel capacity to accommodate the nationwide retransmission of local broadcast stations along with their currently offered national programming. We note that Northpoint Technology, L.P. has filed a petition with the Commission seeking permission to use DBS spectrum to transmit local broadcast signals (and other services).[303] We further note that Capitol Broadcasting Company, Inc. has announced plans to provide local-into-local service to DBS operators for the entire country.[304]

72. An additional retransmission issue involves the fees paid by DBS carriers for carriage of broadcast signals. In August 1997, the Copyright Office of the Library of Congress decided that the compulsory license fee for superstations (previously either 14 cents or 17.5 cents, depending on whether or not they carried nationally-cleared programming) and broadcast stations (previously six cents) should increase to

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[298](...continued)
and Measurement of Signals of Grade B Intensity, CS Docket No. 98-201, Notice of Proposed Rulemaking ("*SHVA NPRM*"), FCC 98-302 (rel. Nov. 17, 1998).

[299]*EchoStar Communications Corp. v. CBS Broadcasting, et al.*, Civil Action No. 98-B-2285 (D. Colo.).

[300]*CBS Broadcasting, et al. v. EchoStar Communications Corp.*, Civil Action No. 98-2651 (S.D.Fla.).

[301]*See Copyright Office Report*, Executive Summary.

[302]*See SHVA NPRM* ¶ 43.

[303]*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 Rulmaking, FCC 98-310 (rel. Nov. 24, 1998).

[304]*See 1997 Report*, 13 FCC Rcd at 1073 ¶ 58. *See also* Vincent Kiernan, *Making Satellites More Local - Two Companies Take Aim At a Major Thorn In the Direct Broadcast Rose*, Satellite Communications, Apr. 30, 1998 (1998 WL 9362705).

27 cents to reflect "fair market value."[305] This determination became effective January 1, 1998, but is stayed pending review by the U.S. Court of Appeals for the D.C. Circuit.[306] In 1976, Congress determined that the retransmission of copyrighted works by smaller cable systems whose gross receipts from subscribers were below a certain dollar amount deserved special consideration because of their mostly rural locations. Therefore, in effect, the cable compulsory license subsidizes smaller systems and allows them to follow a different, lower-cost royalty computation. Large systems, on the other hand, pay in accordance with a highly complicated and technical formula.[307] The change in the royalty fee and confusion over the manner in which fees are assessed has led to even greater controversy as to whether an industry is being disadvantaged. SBCA stated that "average cable systems" pay an average fee of between 2.45 and 9.8 cents, and that the decision to raise royalty fees for satellite carriers to 27 cents creates a competitive disadvantage for DBS.[308] The Leagues, however, assert that this comparison is invalid because, among other reasons, DBS operators do not compare evenly with the SBCA's "average cable system," and because cable systems pay a range of royalties as opposed to the flat fee paid by DBS operators.[309] MPAA, representing copyright holders, performed its own analysis of comparative fees. Its approach shows that cable systems generally pay more than the 27 cent rate when carrying four or more distant signals.[310]

73. *Equipment Prices and Installation*. In the *1996 Report* and the *1997 Report*, we noted that DBS equipment prices, and other "upfront costs," such as installation, were declining.[311] We also noted that DBS operators were aggressively pursuing marketing plans and discount packages to increase demand for their products.[312] Both trends have continued. Strategis Group found that ". . .equipment costs have spiraled downward."[313] For example, EchoStar recently offered installation for $49, as opposed to the normal price of $199.[314] EchoStar also launched separate promotions in which: (1) it will give new subscribers the second dish

[305]62 FR 55743-59 (Oct. 23, 1997).

[306]*Satellite Broadcasting & Communications Association v. The Librarian of Congress*, No. 97-1659 (D.C. Cir filed Oct. 3, 1997).

[307]*See Copyright Office Report.*

[308]SBCA Comments at 15-18.

[309]Leagues Comments at 3-15.

[310]MPAA Comments at 3-5.

[311]*1996 Report*, 12 FCC Rcd at 4328 ¶ 43; *1997 Report*, 13 FCC Rcd at 1073-74 ¶ 60.

[312]*1996 Report*, 12 FCC Rcd at 4382-83 ¶ 44; *1997 Report*, 13 FCC Rcd at 1073-74 ¶ 60.

[313]Minal J. Damani and Jennifer E. Sharpe, *U.S. DBS Marketplace: 1998*, The Strategis Group, Jul. 1998, at 17.

[314]EchoStar Communications Corp., *"The $49 Professional Installation Special" - DISH Network Launches More Channels For Less Money* (press release), Jul. 31, 1998. Primestar later matched this promotion. *See* Primestar, Inc., http://www.primestar.com/ezget/ezget-f.htm.

required for local signals,[315] and (2) it will give away the DBS dish to new subscribers who sign up for a year of certain programming.[316] In terms of specials, DirecTV has offered $200 of free programming with installation and orders for certain programming.[317] In addition, some of the joint marketing agreements with telecommunications companies, discussed below, lower upfront costs. Customers still cite, however, the cost for connecting multiple television sets so that they can watch different programming on different sets, as compared to the lower cost for this capability with cable, as an area where cable has an advantage over DBS.[318]

74. *New Marketing Efforts.* In the *1996 Report*, we indicated a trend toward marketing satellite video programming with telecommunications and information services.[319] In the *1997 Report*, we noted that AT&T ended its effort to market DirecTV's and USSB's satellite programming and DBS equipment, but that an agreement with Cincinnati Bell had been very successful.[320] Over the past year, DirecTV and USSB began joint marketing agreements with GTE, Bell Atlantic, and SBC.[321] GTE markets the DBS service in Los Angeles and Dallas with inserts in its telephone bills, and sells the service through retail locations in those cities.[322] Bell Atlantic and SBC have marketing programs they consider to be complete "cable replacements," and are buying the DSS equipment themselves and leasing it to subscribers, thus lowering upfront costs, and installing an antenna for local signals.[323] In a new strategy, DirecTV signed an agreement under which it

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[315]Monica Hogan, EchoStar Gives Away Dish for Local Service, Multichannel News, Aug. 31, 1998, at 12.

[316]EchoStar Communications Corp., *It's Free! It's That Simple* (press release), Sept. 28, 1998.

[317]*See* DirecTV, Inc, http://www.directv.com/bridge/nfloffer.html.

[318]*Satellite 101*, presentation to FCC Cable Services Bureau by Harry W. Thibedeau, Manager of Industry Affairs, SBCA, Aug. 25, 1998. *See also 1997 Report*, 13 FCC Rcd at 1073 ¶ 59. To watch the same programming on an additional set, a DBS subscriber must buy an "additional room kit" for roughly $90, with no additional cost for programming. The dish that DBS subscribers need to watch different programming on additional sets costs $100 more than a standard dish. Subscribers must purchanse a set-top box for each additional television set at $99, must pay $4.99 a month additionally for the programming for the additional television, and an additional $59 for professional installation. In contrast, to watch different programming on an additional set, cable subscribers must pay, on average, an additional $2.56 a month for equipment for the additional television and an additional $15.41 for installation ($41.17 vs. $25.76). Generally, with cable, there is no charge for the programming for the additional set. Minal J. Damani and Jennifer E. Sharpe, *U.S. DBS Marketplace: 1998*, The Strategis Group, Jul. 1998, at 21.

[319]*1996 Report*, 12 FCC Rcd at 4383 ¶ 45.

[320]*1997 Report*, 13 FCC Rcd at 1075 ¶ 62.

[321]DirecTV, Inc., *GTE and DIRECTV® Sign Marketing and Distribution Pact* (press release), Apr. 7, 1998; DirecTV, Inc., *SBC Communications, DIRECTV® and USSB® Sign Agreements To Offer Digital Satellite TV Service in Apartment Complexes* (press release), Mar. 2, 1998; DirecTV, Inc., *Bell Atlantic, DIRECTV® and USSB® Announce Agreements* (press release), Mar. 2, 1998.

[322]DirecTV, Inc., *GTE and DIRECTV® Sign Marketing and Distribution Pact* (press release), Apr. 7, 1998.

[323]Bell Atlantic is marketing to both MDUs and single-family residences, while SBC is concentrating on MDUs. (continued...)

replaced a cable operator as the provider for an entire homeowners association.[324] DirecTV also is involved in joint marketing, sales, and distribution agreements with three small cable operators: Austin, Texas-based Classic Cable, Chicago-based Anderson-Eliason Cable Group, and Sikeston, Missouri-based Galaxy Telecom. These agreements will result in joint analog-cable/digital-DBS basic programming packages.[325] DirecTV has also signed similar agreements with SMATV operators,[326] and with CS Wireless, an MMDS operator.[327] EchoStar recently pledged that it will not raise its rates for certain types of programming until after March 1, 2000.[328]

75. *Data and Interactive Services*. DirecTV offers a satellite-delivered high-speed Internet access service ("DirecPC"), with a telephone return path. This service allows up to a 400 kbps downstream connection, which is slower than cable modems, but is more than seven times faster than analog telephone modems.[329] This service is available independent of DBS service or, with DirecDUO, a dual-functioning DBS antenna, consumers can receive both video programming and DirecPC services.[330] EchoStar formed a deal with OpenTV, Inc. (a company which produces interactive television technology) in order to offer interactive services, to its subscribers early next year, such as e-mail and on-line banking, and to incorporate OpenTV technology in its next generation of receivers.[331] Finally, both Motorola and Thompson announced that they were going to produce equipment, including DSS systems, which would include Internet access capability.[332]

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[323](...continued)
DirecTV, Inc., *SBC Communications, DIRECTV® and USSB® Sign Agreements To Offer Digital Satellite TV Service in Apartment Complexes* (press release), Mar. 2, 1998; DirecTV, Inc., *Bell Atlantic, DIRECTV® and USSB® Announce Agreements* (press release), Mar. 2, 1998.

[324]DirecTV, Inc., *Suburban Dallas Community Votes For a DirecTV Dish on Every Rooftop* (press release), Aug. 31, 1998.

[325]DirecTV, Inc., *Non-Metropolitan Cable Systems to Offer DirecTV* (press release), Aug. 12, 1998.

[326]*See* para. 93 *infra*.

[327]*See* DirecTV, Inc., *DirecTV Signs Agreement With CS Wireless To Offer Digital TV Service To Single Family Homes* (press release), Dec. 7, 1998. *See also* DirecTV, Inc., *Apartment Community in Minneapolis Suburb the First in Area to Offer DirecTV/USSB and Wireless Service* (press release), Dec. 9, 1998.

[328]EchoStar Communications Corp., http://www.dishnetwork.com/programming/new.htm.

[329]*See* Hughes Network Systems, http://www.direcpc.com/.

[330]*DirecPC: Out of the Closet*, SkyREPORT, Jul. 1997, at 4.

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

[332]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.

76. *High Definition Television*. DirecTV has aggressively promoted the advent of High Definition Television ("HDTV"). In late July, Thomson Multimedia entered an agreement with DirecTV under which Thomson would build televisions and set-top boxes which combine DSS reception with digital terrestrial signal reception.[333] DirecTV also announced that it will begin its own transmission of 24-hour HDTV signals at the end of 1998, probably beginning with pay-per-view events.[334] USSB has announced plans to carry HBO's HDTV signals as soon as they are available, perhaps at no additional cost to subscribers.[335] EchoStar has said that it will carry some of HBO's HDTV programming, but has not specified how much.[336]

77. *Ownership*. Beginning in September 1997, Primestar Inc., a medium power satellite company owned by the five largest cable companies in the U.S., sought to acquire the high power orbital location awarded to MCI (now MCI-WorldCom) by the Commission along with two high-power DBS satellites currently under construction for $1.1 billion in nonvoting convertible securities. Primestar also proposed to reorganize its ownership structure and sought to transfer control of the DBS channels licensed to Tempo from its subsidiary TSAT to Primestar. Acquisition of these high power DBS assets would have given Primestar the capacity to become a high-power DBS operator, allowing its customers to use smaller antennas and increasing its channel capacity. In May 1998, the U.S. Department of Justice ("DOJ") sued to block this transaction over concern that the cable ownership of Primestar, combined with the assignment of MCI's DBS channels would "substantially lessen competition and tend to create a monopoly in markets for the delivery of multichannel programming services."[337] Subsequently, Primestar announced that it would withdraw its petition to acquire ASkyB's orbital slot and would focus on its medium power business and seek financing to support that business.[338] It admitted at that time that it faced challenges in this area due to a lowered credit rating.[339] Other reports indicated that Primestar was attempting to sell its subscribers and slots to either DirecTV or EchoStar.[340] Primestar has subsequently announced that it would not need to sell its assets due to new support

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[333]DirecTV, Inc., *DIRECTV® and Thomson Multimedia To Form Strategic Partnership In Digital Television and Services* (press release), Aug. 4, 1998. *See also* Monica Hogan, *DirecTv Looks to Place Stamp on Hardware*, Multichannel News, Aug. 10, 1998, at 64.

[334]Mike Snider, *Satellite TV To Offer High-Definition Shows*, USA Today, Jan. 1, 1998, at 4D. *See also DTV Broadcast To Get Assist From DBS*, Comm. Daily, Aug. 12, 1998, at 3.

[335]Subscribers would need to purchase new, larger dishes to receive the HDTV signals. DirecTV, Inc., *Coast-To-Coast Digital Service Delivers High Definition Satellite TV Programming to RCA HDTV Products in Key Launch Markets* (press release), Oct. 28, 1998.

[336]*HDTV Challenges Debated at Denver DBS Summit*, Comm. Daily, Jun. 16, 1998, at 6.

[337]*United States of America v. Primestar, Inc, et al.*, filed May 12, 1998, at 3.

[338]*See* Federal Communications Commission, Public Notice, Report # SAT-00004 (rel. Dec. 3, 1998). *See also* Monica Hogan, *TSAT Throws In the Towel*, Multichannel News, Oct. 19, 1998, at 1 and 59 *and Primestar To Focus On Medium Power After Scrapping ASkyB Merger*, Comm. Daily, Oct. 16, 1998, at 2.

[339]*Satellite*, Comm. Daily, Oct. 22, 1998.

[340]*See* Monica Hogan, *Primestar Sub Sale Faces Hurdles*, Multichannel News, Oct. 26, 1998 at 3 and 78; Leslie Cauley, *Hughes's DirecTV Has Held Early Talks To Buy Primestar Assets, Subscribers*, The Wall Street (continued...)

from its major shareholders, that it would continue to build its medium-power business, and that it would launch a new high-power DBS service using licenses and a satellite it is in the process of acquiring from TCI Satellite Entertainment.[341] As noted above, EchoStar has reached an agreement to acquire ASkyB's satellite assets, but the agreement has not been finalized.[342] Finally, also noted above, DirecTV's parent corporation, Hughes, has reached an agreement to acquire USSB, but the agreement has not closed.[343]

78. *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. The statute requires DBS service providers to set aside a percentage of channel capacity for non-commercial programming of an educational or informational nature. In implementing the statutory requirement, the Commission ruled that DBS providers must set-aside four percent of their channel capacity exclusively for non-commercial programming of an educational or informational nature.[344] In carrying out Congress's mandate, the Commission balanced two important goals -- providing DBS subscribers access to a greater diversity of non-commercial, educational programming, and providing flexible rules for an industry that promises to provide significant competition to cable television. The Commission anticipates that a variety of programming could soon become available on DBS systems, including, for example, distance learning programs produced for all ages, major university research projects shared nationwide, and health applications developed for rural America. As specifically required by statute, DBS licensees must also now comply with the political broadcasting rules of Section 312(a)(7) of the Communications Act, granting candidates for federal office reasonable access to broadcasting stations, and 315 of the Act, granting equal opportunities to candidates at the lowest unit charge.

79. *Barriers to Competition*. DirecTV, NRTC, and SBCA also favored a broad extension of the Commission's rules on placement of over-the-air reception devices to MDUs and renters to allow further

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[340](...continued)
Journal, Oct. 16, 1998, at B14.

[341]The high-power plans are contingent on the Commission's approval of the license transfer. *See* Federal Communications Commission, *Satellite Policy Branch Information Comment Requested on Additional Filing*, Public Notice (Dec. 3, 1998). In addition, Bears, Stearns analyst Vijay Jayant is unsure whether the new high-power service will be competitive because of lower channel capacity than other high-power services. *Primestar Unveils High-Power Plans For Tempo Satellite*, Comm. Daily, Nov. 13, 1998, at 2.

[342] EchoStar Communications Corp., *EchoStar Communications Corporation Announces Agreement to Acquire Assets From News Corporation, MCI* (press release), Nov. 30, 1998. MCI is required to begin service from the 110 degree orbital location by December 20, 2000. *Application of MCI Telecommunications Corporation for Authority to Construct, Launch and Operate a Direct Broadcast Satellite System at 110 Degrees*, File No. 73-Sat-P/L-96, Order, 12 FCC Rcd at 12538 (1996). The Commission has indicated, in prior cases, that DBS channels may be revoked and construction permits may be cancelled under due diligence requirements if system buildout requirements are not met. *See FCC Public Notice*, Report # SPB-127 (Jun. 10, 1998), *FCC Public Notice*, Report # SPB-131 (Jul. 14, 1998); *FCC Public Notice*, Report # SPB-138a (Sept. 15, 1998), wherein the Commission reclaimed DBS orbital channels and cancelled the corresponding construction permits.

[343]Hughes Electronics, *Hughes to Acquire USSB* (press release), Dec. 14, 1998.

[344]*See* Federal Communications Commission, *Commission Implements Public Interest Obligations for Direct Broadcast Satellite Service*, MM Docket 93-25, FCC News Release (Nov. 19, 1998).

competition for households in these situations.[345] The Commission recently modified the rules to permit viewers who rent property to install and use antennas where they have exclusive use, such as balconies or patios, in order to remove this barrier to competition to the extent permitted by Section 207 of the Telecommunications Act of 1996.[346] DirecTV and NRTC also urge that the Commission's program access rules must be strengthened to include terrestrially-delivered programming, to impose damages for evading program access rules, and to expedite the resolution of program access complaints.[347] For instance, DirecTV states in its comments that, "...if meaningful competition to the television industry is ever to emerge, the law's provisions should be strengthened, not diluted."[348] DirecTV states that, in regard to the Commission's Inside Wiring rules, exclusive contracts for providing service to MDUs should be forbidden, and that incumbents in MDUs should be required to share inside wiring where technically feasible.[349] DirecTV also supports proposals in Congress to require cable operators to provide a lifeline tier.[350]

C. Home Satellite Dishes

80. As we have previously reported, the difference between DBS service and HSD service is mainly the use of a much larger dish.[351] While some HSD owners receive only non-subscription programming, the number of subscribers most relevant to an assessment of the MVPD market is the figure for authorized subscribers who receive much of the same programming generally provided to cable and other MVPD subscribers. HSD package programming subscribership has declined from 2,184,472 in June 1997 to 2,028,225 in June 1998, or by 7.2%.[352] Much of the decline in HSD subscribership results from owners switching to DBS services.[353] DBS firms like DirecTV have launched aggressive advertising and promotional campaigns encouraging consumers to switch from HSD to DBS service.[354]

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[345]DirecTV Comments at 10-11; NRTC Comments at 17-18; SBCA Comments at 24-25.

[346]*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, FCC 98-273 (released Nov. 20, 1998).

[347]DirecTV Comments at 6-8; NRTC Comments at 13-17.

[348]DirecTV Comments at 6.

[349]In relation to exclusive contracts, DirecTV states that: "Because of their market power, cable operators are able to obtain long-term and even perpetual exclusive contracts from MDU owners, thus foreclosing competition within the affected MDUs for years, if not indefinitely." DirecTV Comments at 9-10.

[350]*Id.* at 11-12.

[351]*1997 Report*, 13 FCC Rcd at 1077-78 ¶ 68.

[352]Current subscriber numbers from SkyREPORT.Com, http://www.skyreport.com/dth_us.htm.

[353]SBCA Comments at 8.

[354]*Satellite*, Comm. Daily, May 8, 1998. For example, DirecTV acquired 3,000 C-band accounts from Fox Sports, and provided them with free DSS equipment and installation.

D. Wireless Cable Systems

1. Multichannel Multipoint Distribution Service

81. MMDS systems, often referred to as "wireless cable," transmit programming to subscribers through 2 GHz microwave frequencies, using Multipoint Distribution Service ("MDS") and leased excess capacity on Instructional Television Fixed Service ("ITFS") channels.[355] 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, MMDS operators have a maximum of 33 microwave channels available in each market, including 13 MDS channels and 20 ITFS channels. Digital MMDS significantly increases this signal capacity, and also improves picture and audio quality, along with making two-way services, such as high-speed Internet access and telephony, possible.[356]

82. At present, the MMDS industry provides competition to the cable industry only in limited areas. The capacity of analog MMDS systems, 33 channels, is generally not competitive with most cable systems, and subscribership drops for MMDS reflect this fact. These subscribership drops, coupled with capital spending aimed at the development of digital MMDS, has put MMDS operators under severe financial strain.[357] According to one report, WCA believes, however, that the advent of digital MMDS and high-speed Internet access will improve the industry's financial status.[358]

83. *MMDS Capacity to Serve Television Households and Subscribership*. The number of homes with a serviceable line of sight to an MMDS operator's transmission facilities grew from 60,300,000 at the end of 1996 to 61,800,000 at the end of 1997, an increase of 2.5%.[359] The number of homes capable of receiving an MMDS operator's signal (commonly referred to as "homes seen") grew from 31,500,000 at the end of 1996

[355]*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 (*"MDS Auction Order"*), 10 FCC Rcd at 9589, 9593 ¶ 7 (1995); *1996 Report*, 12 FCC Rcd at 4386 ¶ 51 n.152.

[356]The local exchange carriers BellSouth, SBC, and GTE have launched digital MMDS systems. (SBC's system was is under contract for sale to Prime Cable.) *See* para. 112 *infra*. As an example of the increased channel capacity, BellSouth's digital MMDS system in New Orleans offers 160 channels. BellSouth Corp., *BellSouth Brings New Era of Home Entertainment Services to New Orleans* (news release), Nov. 17, 1997 at 1. In addition, CS Wireless, purely an MMDS operator, began deploying an interactive digital MMDS system in Dallas-Ft. Worth. *Mass Media*, Comm. Daily, May 27, 1998.

[357]Local exchange carriers deploying digital MMDS are not, obviously, under the same financial strain.

[358]*S&P Says Analog Wireless Cable Isn't Viable, Downgrades Industry*, Comm. Daily, Apr. 17, 1998, at 2.

[359]Paul Kagan Associates, Inc., *Wireless Cable Sub Count and Revenue Projections, 1996-2000*, Wireless Cable Investor, Dec. 31, 1996, at 10-11; Paul Kagan Associates, Inc., *Wireless Cable Sub Count and Revenue Projections, 1997-2001*, Wireless/Private Cable Investor, Mar. 25, 1998, at 4-5.

to 34,000,000 at the end of 1997, an increase of 8%.[360] MMDS subscribership fell from 1,180,000 at the end of 1996 to 1,050,000 at the end of 1997, a decrease of 11%.[361] As stated in the *1997 Report*, this drop in subscribership may have resulted from a reduction of marketing of analog MMDS service in some markets in anticipation of deployment of digital service.[362]

84. *Financial Performance*. The wireless cable industry's total revenues for 1997 were $440 million, a 4.8% increase from the $420 million in 1996.[363] Numerous questions about the industry's viability were raised in the last year, however. First, in April, Standard & Poor's lowered the debt rating on all wireless cable companies to CCC+, and Heartland Wireless, a large wireless operator, to D, stating that analog wireless cable is not a viable competitor to cable.[364] Three months later, CAI Wireless, one of the largest wireless cable operators, declared Chapter 11 bankruptcy.[365] More recently, Heartland Wireless also declared bankruptcy.[366] As stated above, according to one report, WCA believes that the advent of digital MMDS and high-speed Internet access will improve the industry's financial status.[367]

85. *Internet and High-Speed Data Services.* On September 17, 1998, the Commission adopted an order authorizing two-way digital ITFS and MDS communications.[368] This action will permit these licensees to provide two-way high-speed Internet access, video conferencing, distance learning, continuing education, or any other two-way service using MMDS and ITFS spectrum.[369] While three wireless cable

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[360]*Id.* The number of homes with a "servicable 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 which MMDS operators have the technical ability to serve. For more discussion, *see 1997 Report*, 13 FCC Rcd at 1081 ¶ 74, fn. 272.

[361]*Id.*

[362]*1997 Report*, 13 FCC Rcd at 1082 ¶ 75.

[363]*Id.*

[364]*S&P Says Analog Wireless Cable Isn't Viable, Downgrades Industry*, Comm. Daily, Apr. 17, 1998, at 2.

[365]CAI Wireless Systems, Inc., *CAI Wireless Bankruptcy Plan Confirmed* (press release), Sept. 30, 1998. *See also Mass Media*, Comm. Daily, Jul. 31, 1998; Monica Hogan, *CS Wireless Tries to Avoid CAI Bankruptcy Shadow*, Multichannel News, Jul. 13, 1998 at 54; *CAI Wireless Likely to Seek Chapter 11 Filing*, Private Cable & Wireless, Aug. 1998, at 30.

[366]Heartland Wireless Communications, Inc., *Heartland Announces Agreement With Senior Bondholders To Support Plan of Reorganization* (press release), Oct. 6, 1998.

[367]*S&P Says Analog Wireless Cable Isn't Viable, Downgrades Industry*, Comm. Daily, Apr. 17, 1998, at 2.

[368]*See Amendment of Parts 1, 21, and 74 to Enable Multipoint Distribution Service and Instructional Television Fixed Service Licensees to Engage in Fixed Two-Way Transmission*, Report and Order ("*Two-Way Order*"), FCC 98-231 (Sept. 17, 1998).

[369]*Id.*

operators have already received limited approval to offer wireless two-way services,[370] the *Two-Way Order* provides licensees and operators greater flexibility to provide broadband two-way wireless services, and establishes a framework for expedited licensing of two-way facilities. In addition, Commission staff has granted developmental authority for wireless two-way services in several markets.

86. *Barriers to Competition*. WCA requests that Congress amend the program access statute to apply to all programming, regardless of method of delivery or affiliation, in order to assure wireless cable operators access to all programming and thus improve their ability to compete in the MVPD market.[371] Antilles, a small wireless operator, in its comments states, "Smaller wireless operators like Antilles Wireless suffer from a serious lack of accessibility to programming. While the Cable Television Consumer Protection and Competition Act of 1992 theoretically outlawed discrimination by programmers in the offering of programming to wired and wireless video operators, the real world has yet to see the benefits of the law."[372] Several other commenters, however, disagree with WCA's position on program access, stating that expanding program access rules could damage the programming industry.[373] WCA also states that: (a) the Commission's cable-MDS cross-ownership rule, cable-MDS cross-leasing rule, and cable-ITFS cross-leasing rule unduly restrict investment in the wireless cable industry by the cable industry; (b) Congress should clarify the Commission's jurisdiction over home run wiring,[374] thus improving cable competitors' ability to provide service to MDUs; and (c) Congress should clarify that competitive bidding is not required to resolve new, mutually exclusive ITFS applications to assure the continuation of ITFS as a local and non-commercial service.[375] An additional competitive issue was whether the Commission's OTARD rules would be extended to MDUs and renters. As noted earlier, the Commission recently modified the rules to permit viewers who rent property to install and use antennas where they have exclusive use, such as on balconies or patios.[376]

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[370]The three wireless operators are CAI Wireless in Boston (CAI Wireless Systems, Inc., *CAI Wireless System Receives the First Permanent Approval From the FCC to Use Wireless Cable Spectrum for Two-Way Services* (news release), Jan. 31, 1997), ATI Telecasting in Denver and Colorado Springs, Colorado (American Telecasting, Inc., *American Telecasting, Inc. Launches High Speed Internet Service in Denver* (news release), Feb. 17, 1998), and People's Choice TV Corporation in Phoenix, Arizona (Hybrid Networks, Inc., *Hybrid Networks to Support SpeedChoice Launch of High-Speed Wireless Data Services* (press release), Sept. 29, 1998).

[371]*See* WCA Comments at 5-11.

[372]Antilles Comments at 3.

[373]Viacom Reply Comments at 4-5; NCTA Reply Comments at 11-13; Lifetime Reply Comments at 1-5; Comcast Reply Comments at 26-28.

[374]Home run wiring is defined as "...the wiring from the point at which it becomes dedicated to an individual unit in a multiple dwelling unit building ('MDU') to the cable 'demarcation point' at or about 12 inches outside that unit...." *Telecommunications Services, Inside Wiring and Customer Premises Equipment*, CS Docket No. 95-184, *Implementation of the Cable Television Consumer Protection and Competition Act of 1992*: *Cable Home Wiring*, MM Docket No. 92-260, Report and Order and Second Further Notice of Proposed Rulemaking, 13 FCC Rcd at 3659 ¶ 2 (1997).

[375]*See* WCA Comments at 11-20.

[376]*Restrictions on Over-the-Air Receptions Devices: Television Broadcast, Multichannel Multipoint*

(continued...)

2. Local Multipoint Distribution Service

87. Previously, the Commission reported that LMDS was a potential competitor in the MVPD market.[377] It now appears the LMDS licensees will not be competitors in the video market, at least in the short term. Analysts and bidders in the LMDS auctions stated that plans for LMDS were for commercial voice and high-speed data, and that LMDS is not currently suited for video delivery or for residential service.[378] At the end of November 1998, the only existing provider of video over LMDS, CellularVision in New York City, sold more than half its spectrum to WinStar, a competitive local exchange carrier.[379] Winstar intends to use this spectrum to build an Internet access business.[380] CellularVision has announced that it will quit the video business and use its remaining spectrum to offer high-speed Internet access.[381]

E. Satellite Master Antenna Television Systems

88. As we indicated in last year's *Report*, 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.[382] SMATV systems do not use public rights-of-way and, thus, fall outside of the Communications Act's definition of a cable system.[383] As such, SMATV operators are subject to less regulatory oversight than traditional cable systems.[384] Some SMATV systems also are using microwave transmissions and

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[376](...continued)
Distribution and Direct Broadcast Satellite Services, CS Docket No. 96-83, Second Report and Order, FCC 98-273 (released Nov. 20, 1998).

[377]*1997 Report*, 13 FCC Rcd. at 1084 ¶ 79.

[378]*See, e.g.*, Masood Khan, *The Lure of LMDS*, Private Cable & Wireless Cable, Jun. 1998, at 34.

[379]CellularVision USA, Inc., *CellularVision USA Announces Closing of Spectrum Assignment To WinStar Communications* (press release), Nov. 25, 1998.

[380]*Telephony*, Comm. Daily, Nov. 27, 1998.

[381]CellularVision USA, Inc., *CellularVision Announces $32.5 Million Sale of Selected Frequencies* (press release), Jul. 13, 1998.

[382]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.

[383]1996 Act sec. 301(a)(2), 47 U.S.C. § 522(7).

[384]*Id.* 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; (continued...)

wires to serve multiple buildings that are not commonly owned.[385] 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.[386] It was thought that the statutory change that allowed SMATV systems to connect separately owned buildings would encourage growth in the private cable industry.[387]

89. On January 10, 1998, Entertainment Connections, Inc. ("ECI") filed a motion for declaratory ruling with the Commission seeking a determination that it was not a cable operator, and therefore, not required to obtain a franchise under section 621 of the Communications Act of 1934.[388] ECI uses Supertrunking Video Transport Service, provided by Ameritech, to transport video programming across public rights-of-way to subscribers located in multiple dwelling units ("MDUs") in two Michigan cities.[389] ECI's facilities are located solely on private property, not crossing any public rights-of-way, and Ameritech's facilities that deliver signals from ECI's headend facilities to the MDUs served by ECI are not owned, managed, or controlled by ECI.[390] On June 4, 1998, the Commission adopted a *Memorandum Opinion and Order*, granting ECI's Motion for a Declaratory Ruling.[391] The Commission concluded that ECI is not a cable operator as defined by the Communications Act and is not obligated to comply with the requirements of Title VI of the Communications Act, including the franchising obligations of Section 621.[392] In granting ECI's motion, the Commission decided

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[384](...continued)
(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, n 296.

[385]*1997 Report*, 13 FCC Rcd at 1085 ¶ 82. The Commission held in 1991 that microwave transmissions do not "use" public rights-of-way. *18 GHz Order*, 6 FCC Rcd at 1271 ¶ 10.

[386]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, n 297.

[387]Growth for specific SMATV firms is seen as a result of heavy industry consolidation. Telephone interview with Robert D. Berger, Senior Vice President, Communications Equity Associates (Oct. 2, 1998).

[388]*Entertainment Connections, Inc., Motion for Declaratory Ruling*, Memorandum Opinion and Order ("*1998 ECI Ruling*") 13 FCC Rcd at 14277 (1998) ¶ 1.

[389]*Id.* at 14278 ¶ 5.

[390]*Id.* at 14278 ¶ 6.

[391]*Id*. at 142927 ¶ 30. *See also 1998 ECI Ruling*, Dissenting Statement of Commissioner Tristani, 13 FCC Rcd at 14314, the Consolidated Appeal currently pending in the United States Court of Appeals for the Seventh Circuit, No. 98-2729, and the *Order On Motion For Summary Judgement*, in the United States District Court for the Western District of Texas Austin Division, A-98-CA-028.

[392]*1998 ECI Ruling*, 13 FCC Rcd at 14306-14308 ¶¶ 61-64.

that ECI's facilities and Ameritech's facilities do not constitute a single integrated cable system, and that it is Ameritech, not ECI, that "uses" the rights-of-way as the Commission and courts have interpreted the term.[393]

90. *Growth.* As we have reported in the past, the SMATV industry is composed of hundreds of private and public, small and medium size firms throughout the nation.[394] As of 1990, there were almost 31.5 million "households" (or, individual "dwelling units") in MDUs in the United States, compromising approximately 28% of the total housing units nationwide.[395] As such, SMATV operators continue to have the potential to serve over one quarter of housing units nationwide. Last year, we reported that there were approximately 1,162,500 residential SMATV subscribers, as of June 30, 1997.[396] This year, there are several varying estimates of SMATV subscribership. One source estimates that there were 940,000 residential SMATV subscribers, as of June 1998, a decrease of 19.1% from the previous year.[397] This estimate would place SMATV's share of the MVPD market at 1.21%.[398] Another source estimates that as of June 1998, there were approximately 800,000 residential SMATV subscribers, and anticipates that the number of SMATV subscriptions will continue to decline.[399] A SMATV industry source estimates that as of June 1998 there were approximately 1.5 to 1.6 million subscribers.[400] It states that this figure is an estimate based on a growth rate in excess of 10% per year, consistent with growth rates in prior years.[401]

91. Although subscribership over the past year appears to have declined, certain technological advents have the potential to foster SMATV growth. As we reported last year, many SMATV operators are upgrading their systems to 750 MHz hybrid fiber coaxial broadband architecture capable of transmitting hundreds of channels using digital compression.[402] This year, common carrier supertrunking and the continued use of technologies that integrate DBS antennas and standard SMATV technology, as described below, have the potential to foster SMATV industry growth as well. These technological advances and the regulatory changes that have allowed SMATV operators to use them, enable operators to serve separately-owned buildings and increased numbers of potential subscribers. Future growth, however, not only depends on the

[393] *Id.* at 14306 ¶ 62.

[394] *1997 Report*, 13 FCC Rcd at 1085 ¶ 84.

[395] U.S. Bureau of the Census, *American Housing Survey*, Tables 1-4 (1990). These figures exclude nursing homes, hospitals, and hotels which are not considered "housing units" by the Census Bureau.

[396] *1997 Report*, 13 FCC Rcd at 1085 ¶ 84.

[397] NCTA Comments at 6.

[398] *Id.* See also Paul Kagan Assoc., Inc., Private/Wireless Cable Investor, Jul. 30, 1998 at 1-2; telephone interview with Robert D. Berger, Senior Vice President, Communications Equity Associates (Oct. 2, 1998). Subscribership in the private cable industry *(i.e.*, "SMATV industry") has noticeably declined over the past year.

[399] Veronis, Suhler & Associates, *Communications Industry Forecast* at 168 and 174.

[400] Letter from William J. Burhop, Executive Director, ICTA at 1 (Nov. 18, 1998) ("*Burhop Letter*").

[401] *Burhop Letter* at 1.

[402] *1997 Report*, 13 FCC Rcd at 1088 ¶ 88.

ability of SMATV operators to provide channel lineups and basic services comparable to those offered by franchised cable operators, but also demands that SMATV providers offer combination services as well as video, at attractive prices.[403]

92. *Technology.* As we reported last year, some SMATV operators offer local and long distance residential telephone service as well as closed-circuit security monitoring, interactive and Internet access, voice mail, paging, and other business services tailored to the needs of residential tenants.[404] This year, the demand for these services has increased. As a result, some SMATV operators have begun to upgrade their networks for providing local residential phone service. Many have started to use a variety of new networking arrangements, turning away from private branch exchange ("PBX") technology to a standard central-switch operation enabling SMATV operators to offer service levels on their telephone service equal to that of the independent local exchange carriers, including caller ID, call return, call rejection, distinctive ringing, and other such specialized features.[405] OpTel, one of the largest SMATV operators, is currently licensed as a CLEC in each state in which it competes.[406] Additionally, new technologies are being introduced into the SMATV industry that are not found with other MVPD technologies. For example, one entrepreneur has developed an electronic, touch-screen monitor kiosk to be placed on-site at the MDU that provides information about the services offered in the MDU including channel lineup, rates, a credit-card swipe to order services such as PPV, Internet, and telephone service.[407]

93. *SMATV/DBS Combination Services.* According to some industry observers, the decision of SMATV providers to take advantage of DBS technology to provide video programming service to residents of multiple dwelling units has been beneficial for both SMATV and DBS providers.[408] As we reported last year, satellite providers such as DirecTV/USSB, Primestar, and Echostar offer SMATV operators a low-cost, technically-advanced, digital programming service that significantly increases channel capacity and adds special programming that is otherwise unavailable from cable systems or MMDS operators.[409] DirecTV, for example, has formed a number of alliances with SMATV operators such as WirelessOne, OnePoint

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[403]William J. Burhop, *Competitive Strategies of PCOs in the MDU Market,* Private Cable & Wireless Cable, Jun. 1998, at 18-19.

[404]*1997 Report,* 13 FCC Rcd at 1088-1089 ¶ 88.

[405]William J. Burhop, *Competitive Strategies of PCOs in the MDU Market,* Private Cable & Wireless Cable, Jun. 1998, at 18-19, and Newton's Telecom Dictionary at 450 and 577. PBX telephone technology is usually used to connect smaller communities with one another. Originally, an operator was needed to make the connection to outside the inner community, then technology was developed in which the caller simply could dial a "9" to "get outside" the inner PBX network to the main telephone company centrally switched system. Today SMATV operators are seeing the value of by passing PBX technology altogether and connecting their customers to centrally switched telephone connections as are most telephone users.

[406]OpTel Comments at 1.

[407]Paul Kagan Assocs., Inc., *Private/Wireless Show News*, Wireless-Private Cable Investor, Oct. 6, 1998, at 4.

[408]NCTA Comments at 2-3.

[409]*1997 Report,* 13 FCC Rcd at 1085 ¶ 88.

Communications, and Heartland Wireless.[410] NCTA states that, in the case of Wireless One, the company keeps approximately 20% of the revenue generated, with the rest going to DirecTV, which supplies equipment and programming.[411]

94. *Real Estate Owners and Property Managers.* As we reported last year, Real Estate Investment Trusts ("REITS")[412] and other national property management companies and ownership groups, with numerous interstate property holdings, are negotiating with programming and other MVPD services on a national basis.[413] According to industry observers, private property owners are becoming more adept in negotiating contracts with SMATV operators, allowing for revenue sharing and demanding increased services for subscribers.[414] An industry source indicates that an increasing number of small and large MDU owners and real estate investment trusts are negotiating with SMATV operators to provide service in their buildings regionally and nationally because SMATV can offer a viable alternative to other MVPDs in terms of number of channels, installations and maintenance, and the provision of service at rates comparable or lower than incumbent providers.[415] SMATV operators in Cincinnati and Chicago, in particular, are finding REITS and apartment building owners are forming consortiums and seeking SMATV bids for thousands of apartment buildings.[416]

F. Broadcast Television Service

95. Broadcast networks and stations are competitors to other MVPDs in the advertising and program acquisition markets. Additionally, broadcast networks and stations are suppliers of content for distribution by MVPDs.[417] Since the *1997 Report*, the broadcast industry has seen continued growth in the number of operating stations and in advertising revenues. The number of commercial and noncommercial television stations increased to 1583 as of August 31, 1998, from 1561 as of July 31, 1997.[418] Broadcast total

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[410]*Partner of the Year*, Private Cable & Wireless Cable, Nov. 1998 at 16; DirecTV Comments at 19.

[411]NCTA Comments at 34; DirecTV Comments at 19.

[412]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.

[413]*1997 Report*, 13 FCC Rcd at 1085 ¶ 89.

[414]Telephone interview with Robert D. Berger, Senior Vice President, Communications Equity Associates(Oct. 2, 1998).

[415]*Burhop Letter* at 2.

[416]Paul Kagan Assocs., Inc., *Other Private/Wireless Show News*, Wireless-Private Cable Investor, Oct. 6, 1998 at 5.

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

[418]*Compare* Federal Communications Commission, *Broadcast Station Totals as of August 31, 1998*, FCC News Release (Sept. 11, 1998) *with* Federal Communications Commission, *Broadcast Station Totals as of July 31, 1997*, (continued...)

advertising revenues reached $32.5 billion in 1997, a 4% increase over 1996.[419] Advertising revenues for the six broadcast networks alone reached $15.2 billion in 1997.[420] Network advertising rates, however, are estimated to have dropped by 3% between the 1998-99 and 1997-98 seasons (in comparison to an average increase of 6.5% since 1980), mainly because of competition from cable networks.[421] Broadcasters sold slightly more advance commercial time for the 1998-99 season (between $6.4 and $6.5 billion) than was sold for the 1997-98 season (between $6.25 billion and $6.3 billion).[422] In comparison, cable programming networks received $5.7 billion in advertising revenue in 1997, an increase of 16% over 1996.[423]

96. During the 1997-98 television season, the four major networks (i.e., ABC, CBS, Fox, and NBC) accounted for a combined 55% share of prime time viewing among all television households (compared to 59% in the previous year); UPN and WB, the two newest networks, achieved a combined 9% share of prime time viewing, the same as last year.[424] The most recent data available for households subscribing to cable service indicate that programming originating on local broadcast television stations accounted for a combined 58% share of all day viewing in the 1996-97 television season, while non-premium cable networks and pay cable services achieved a combined 54% share of all day viewing, up from 51% the previous season.[425] On August 31, 1998, PaxTV, a new national broadcast network began operation.[426] PaxTV generally offers family-oriented programming,[427] and uses cable carriage[428] or C-Band carriage[429] to reach some households in areas where it does not have a broadcast affiliate.

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[418](...continued)
FCC Public Notice (Aug. 29, 1997).

[419]Television Bureau of Advertising, *TVB Releases 1997 TV Ad Revenue Figures* (news release), Mar. 11, 1998.

[420]*Id.* This figure represents sales for ABC, CBS, Fox, NBC, UPN and WB.

[421]Melanie Wells, *New TV Season Sees Drop in Ad Rates*, USA Today, Sept. 21, 1998.

[422] Stuart Elliott, *Networks Cheered by Sales of 1998-99 Commercial Time*, The New York Times, Jun. 17, 1998, at D1.

[423]NCTA, *Cable Advertising Revenue: 1982-1997 (In Millions)*, Cable Television Developments, Spring 1998, at 9 (*citing* Paul Kagan Assocs., Inc., *Cable TV Advertising*, Mar. 31, 1998, at 2).

[424]*People's Choice: Broadcast Network Prime-Time Ratings According to Nielsen, Sept. 14-20*, Broadcasting & Cable, Sept. 28, 1998, at 42.

[425]NCTA, *Viewing Shares: Broadcast Years 1986/1987-1996/1997*, Cable Television Developments, Spring 1998, at 5 (*citing* A.C. Nielsen Co. statistics). Reported audience shares exceed 100% due to multiple set viewing.

[426]The above numbers do not include PaxTV because it was launched after they were compiled. Sharon Waxman, *The New Nyetwork: No Sex, No Violence*, The Washington Post, May, 27, 1998, at D1.

[427]*Id.*

[428]Linda Moss, *PaxTV Premiere Scores Strong Ratings*, Multichannel News, Sept. 7, 1998 at 34.

[429]*Satellite*, Comm. Daily, Oct. 15, 1998.

97. The Commission took several actions on digital television ("DTV") during the past year. First, the Commission reallocated television channels 60-69 for public safety use and to free some of the spectrum for auction. Four of the freed channels were allocated for public safety, and the rest will be auctioned.[430] Second, the Commission reaffirmed its service rules for the conversion by all U.S. broadcast television stations to DTV, including build-out construction schedules, analog and DTV channel simulcasting, and the return of analog channels to the government by 2006.[431] Finally, the Commission adopted the final DTV allotment table, reaffirming DTV channel assignments and other technical rules and procedures with minor modifications.[432]

98. As stated in the *1997 Report*, affiliates of the top four networks in the top ten markets are required to be on the air with digital signals by May 1, 1999.[433] Certain volunteer stations in the top ten markets agreed to be on the air by November 1, 1998,[434] and 41 stations planned to begin DTV service on or near that date.[435] As reported in the *1997 Report*, as of December 31, 1997, seven DTV construction permits had been granted.[436] This year, as of December 2, 1998, 118 DTV construction permits had been granted, with an additional 71 pending.[437] Chicago and San Francisco appear to be the only top ten market in which none of the broadcast stations met the November 1, 1998 deadline, due to tower problems.[438]

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[430]*Reallocation of Television Channels 60-69, the 746-806 MHz Band*, ET Docket No. 97-157, Report and Order, 12 FCC Rcd 22935 (1997).

[431]*Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, MM Docket No. 87-268, Memorandum Opinion and Order On Reconsideration of the Fifth Report and Order, 12 FCC Rcd 6860 (1998).

[432]*Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, MM Docket No. 87-268, Memorandum Opinion and Order On Reconsideration of the Sixth Report and Order, 13 FCC Rcd 7418 (1998).

[433]*1997 Report*, 13 FCC Rcd at 1091-92 ¶ 94.

[434]*Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Dkt. No. 87-268, Fifth Report and Order, 12 FCC Rcd at 12840-41 ¶ 76 (1997).

[435]NAB, *Free, Over-the-Air Digital Television: Broadcasters Deliver Digital On-Time* (press release), Oct. 6, 1998.

[436]*1997 Report*, 13 FCC Rcd at 1093-94 ¶ 96.

[437]For a full list of pending and granted DTV construction permits, *see* the FCC website, http://www.fcc.gov/mmb/vsd/files/dtvpend.html.

[438]*Mass Media*, Comm. Daily, May 8, 1998; *Mass Media*, Comm. Daily, Oct. 9, 1998. *NAB Says 42 Stations Are Delivering on the Digital Pledge*, Comm. Daily, Oct. 7, 1998, at 6. In addition, one station in New York City, WNBC, and one station in Detroit, WWJ-TV, will not meet the November 1 deadline. The other stations in these markets will meet the deadline.

99. While the first DTV sets went on sale in August,[439] these televisions are not compatible with the cable industry's preferred method of delivering DTV signals.[440] While cable operators are today capable of simply "passing through" an 8VSB-modulated DTV signal which can be received by current DTV receivers,[441] the cable industry's preferred method of delivering DTV signals involves using the IEEE 1394 standard to connect cable set-top boxes and DTV receivers.[442] Unfortunately, no currently-available DTV receiver contains IEEE 1394 inputs. Accordingly, the ability of these first-generation DTV sets to receive DTV programming over cable will depend on whether individual cable operators implement alternative compatibility solutions, such as 8VSB pass-through or component video conversion, and it is possible that some customers will initially not be able to receive DTV signals through their cable systems. The Consumer Electronics Manufacturers Association ("CEMA") and NCTA released an interoperability specification based on the IEEE 1394 standard on November 2, 1998, which, they indicate, should allow for commercial deployment by November 1999.[443]

100. In addition, the issue of copy protection is not fully resolved. Copy protection is an important issue for the transition to DTV because, unlike copies of analog video content, digital copies do not deteriorate when copied repeatedly and can be widely distributed over today's digital networks, such as the Internet. Until a copy protection solution is defined, content owners may limit the availability of high-value content for display on DTV receivers, which may in turn slow consumer adoption of DTV equipment. In response to requests for proposals by the Copy Protection Technical Working Group ("CPTWG") -- a study group that includes representatives from the major production studios -- several copy protection solutions for video content have

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[439]*DTV Sales Begin in Small Quantities*, Comm. Daily, Aug. 11, 1998, at 4. An additional issue is the availability of VCRs which are compatible with HDTV. No VCR which is compatible with all HDTV broadcasts is available, and none has been announced. Evan Ramstad, *In HDTV Age, Successor to VCR Is a Long Way Off*, The Wall Street Journal, Apr. 8, 1998, at B1.

[440]Joel Brinkley, *Cable Difficulties May Thwart HDTV Debut*, The New York Times, Jun. 8, 1998, at D5.

[441]8VSB pass-through allows full compatibility with cable and permits DTV receivers to display a full-resolution (including high-definition) DTV signal. Time Warner will initially rely on 8VSB pass-through to implement its recent DTV carriage agreement with CBS, under which upgraded Time Warner cable systems will carry each CBS DTV station as soon as it becomes available in a market. *CBS and Time Warner Reach DTV Carriage Deal*, Comm. Daily, Dec. 9, 1998 at 1; *Time Warner, CBS Ink HD Deal*, Multichannel News, Dec. 14, 1998, at 1.

[442]The cable industry views 1394 as a low-cost, bandwidth-efficient solution that can preserve DTV signal quality. Letter from Decker Anstrom, President and CEO, National Cable Television Association, to Senator John McCain, Aug. 14, 1998.

[443]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 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 televisions which do not suffer from this incompatibility could be available for sale by November 1999. The NCTA and CEMA standards agreement was in response to Chairman Kennard's letter, and it appears that the consumer electronics industry will be able to meet this latter deadline. Letter from William E. Kennard, Chairman, FCC, to Decker Anstrom, President and CEO, NCTA and Gary Shapiro, President, CEMA, Aug. 13, 1998.

been proposed. One leading proposal is the Digital Transmission Content Protection ("DTCP) method, which has been developed by the so-called "5C" group of companies consisting of Intel, Toshiba, Sony, Hitachi, and Matsushita.[444] Recently, Zenith and Thomson proposed a different copy protection standard, known as the Extended Conditional Access or "XCA" method, which they claim offers a better overall solution than the 5C method.[445] A number of other proposals also have been offered. Until resolved, the copy protection issue could slow the deployment of next-generation DTV consumer products (e.g., DTV receivers that incorporate the 1394 digital interface) because manufacturers may choose to await the eventual completion of a satisfactory copy protection solution prior to completing the design of new products.[446] Additional potential problems include the fact that current indoor antenna designs may not always provide satisfactory over-the air reception. Also, with respect to DBS, at least one manufacturer is now selling DTV sets with a built-in satellite receiver, but current DBS subscribers will need a digital-to-analog converter to display DTV signals on their existing analog television receivers.[447]

101. DTV has the potential to allow the broadcasters to become more effective competitors with cable operators in the MVPD market. Under the Commission's rules for DTV, digital encoding and transmission technology will permit stations to broadcast one or perhaps two High Definition Television ("HDTV") signals, multiple streams of Standard Definition Television ("SDTV") signals, or some combination. Some broadcasters have proposed that they combine the digital spectrum of all stations in a local television market to create a 40 to 50 channel service that could compete with MVPDs.[448] At this time, however, it is unclear the proportion of HDTV to multicast SDTV that broadcasters will offer, or what broadcasters would show on multiple channels, and no deals on combining digital spectrum have been announced.[449] Thus, at least for the near term, it appears unlikely that broadcast television will offer consumers a multichannel video programming service in competition with cable.

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[444]Cable Television Laboratories, Inc., *The Copy Protection Issue and its Impact on Cable*, Specs Technology, June 1998, at 3-6.

[445]*Zenith, Thomson Propose New Copy Protection Method for DTV*, Cableday, Nov. 13, 1998, at 2-3.

[446]CEMA and NCTA each acknowledge the importance of a supporting the ability to protect video content transmitted over a 1394 digital connection. Letter to Chairman Kennard from Decker Anstrom, President and CEO, NCTA and Gary Shapiro, President, CEMA, Oct. 30, 1998.

[447]In Washington, D.C., for example, televisions in 40% of locations were unable to receive DTV signals using indoor antennas. Joel Brinkley, *Cable Difficulties May Thwart HDTV Debut*, The New York Times, Jun. 8, 1998, at D5.

[448]*1997 Report*, 13 FCC Rcd at 1092-93 ¶ 95.

[449]*See, e.g.*, Joel Brinkley, *Ready or Not, Here Comes HDTV*, The New York Times, Apr. 6, 1998, at D1; David Lieberman, *Broadcasters Seek How To Profit From Digital TV*, USAToday, Apr. 8, 1998, at 2B; *Industry Can't Agree On Objectives As Digital TV Era Nears*, Comm. Daily, Jan. 23, 1998, at 4. WFAA-TV in Dallas, for instance, began its broadcasts with a mix of HDTV and SDTV simulcast from its regular broadcasts, while WBFF and WNUV-TV in Baltimore began multicasting SDTV. *List of DTV Stations On Air Grows By 3 In One Day*, Comm. Daily, Mar. 3, 1998, at 4. CBS and NBC have decided to offer HDTV in prime time until consumers indicate what they want. *NBC and CBS Will Go Pure 1080 Interlace HDTV In Prime Time*, Comm. Daily, Apr. 1, 1998, at 4.

G. Other Entrants

1. Internet Video

102. At the end of 1997, 44% of all households owned a personal computer and 60 million adults and 20 million children were Internet users.[450] 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.[451] We also noted that there are technologies available for the provision of Internet video over a television using set-top box Internet access and through the WebTV and Worldgate service packages.[452] As of June 1998, investment and development of Internet video services was continuing, although long form video programming offered by Internet video still remains less than broadcast quality.[453] Media companies continue to offer increasing amounts of video over their websites in the expectation that the pictures will reach broadcasting, cable or VCR quality of play.[454]

103. In the *1997 Report*, we indicated that several firms were providing software for placing video content on the Internet, but that the availability of video content was limited.[455] Since then, some providers of Internet video software have grown such that they now offer access to more traditional video content. A few Internet streaming providers formed alliances with content producers such as major record labels and broadcasters. As a result they now provide direct access to video programming content through their products.[456] In July 1998, RealNetworks formed an alliance with Atlantic Records and Sony music,

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[450]*See* Veronis, Suhler & Associates, *Communications Industry Forecast* at 316; see also Emerging Technologies Research Group, *User Trends*, http://etrg.findsvp.com/timeline/trends.html.

[451]*1995 Report*, 11 FCC Rcd at 2121 ¶ 127, and *1996 Report*, 12 FCC Rcd at 4412-13 ¶ 99. Downloadable video for future playback is one of the most widely used methods of obtaining Internet video. Compression techniques significantly reduce the size of the video file sent, but consumers still expend considerably more time downloading a file than "playing" it. The downloadable file must be downloaded entirely before it can be played using an appropriate player application, and resides on the hard disk of the user's computer. The time to download a file depends on the speed of the Internet connection, how busy the server sending the video file is, and the size of the video file. *See* 13 FCC Rcd at 1094 ¶ 100. "Streaming" is the other primary mode of receiving video from the Internet. Streaming eliminates both the wait time associated with downloading a video file and the storage of that file on the consumer's hard disk. Video using a streaming format can be viewed in real time by a consumer using a 28.8 Kbps telephone modem (or faster) connection. *See 1997 Report*, 13 FCC Rcd at 1094 ¶ 101.

[452]*1997 Report*, 13 FCC Rcd at 1094 ¶ 97. *See* para. 54 *supra*.

[453]Internet video still has not reached the quality of traditional video because of limited bandwidth and transmission delays of the Internet itself. *See* Richard Tedesco, *The Not Ready for Prime Time Medium*, Broadcasting & Cable, May 25, 1998, at 22, and Jim Heid, *Web: Watch This: Streaming Video on Your Web Site*, Macworld Online Magazine Column, Apr. 1998, http://macworld.zdnet.com/pages/april.98/Column.4228.html.

[454]Richard Tedesco, *The Not Ready for Prime Time Medium*, Broadcasting & Cable, May 25, 1998, at 22.

[455]*1997 Report*, 13 FCC Rcd at 1094 ¶ 97 ns. 356 and 357.

[456]Streaming video software providers often offer "presets" to certain programming choices, allowing the viewer (continued...)

introducing a music service with archives of full-length music videos available for access through streaming.[457] In August 1998, NBC announced plans to invest in Intertainer Inc., a start-up online service, to provide movies, television programs and music on demand through personal computers.[458] Under this agreement, viewers would be able to see NBC-owned programming (e.g., *Dateline*) at their convenience, although there is some concern about the reaction of local affiliated stations to this plan.[459] The website broadcast.com offers broadcasts of 21 television stations and cable networks.[460]

104. Some cable networks also are creating Internet video content, stored on their websites, available for playback over RealNetworks' RealPlayer G2™ or other similar software packages. In June 1998, the American Health Network ("AHN") began offering a weekly operating room series, *Behind the Mask*, and other "special events" such as a live birth and a heart surgery.[461] AHN uses RealNetworks' RealVideo streaming technology to video-stream its programming choices.[462] Cable News Networks has archived, on its main website, episodes of *Larry King Live* and *Crossfire* for viewing through two different streaming video software packages.[463] The Independent Film Channel ("IFC") and Bravo have created "broadband sites" that offer originally produced full-motion Internet video that supplements their standard cable video networks. Users, however, can only gain access to these sites through cable operators offering this service who provide it to customers with cable modem access.[464]

105. Despite the increase in interest in Internet video, the medium is not seen as a direct competitor to traditional video services at this time. Currently, Internet video is used primarily for news, sports clips, and other brief video excerpts because of the inferior quality of the picture and the need for viewers to have the

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[456](...continued)
to select programming directly from the streaming software package menu.

[457]Richard Tedesco, *Atlantic, Sony Launch RealVideo Networks*, Broadcasting & Cable, Jul. 20, 1998, at 61.

[458]Andrew Pollack, *NBC Backing an On-Line TV Service*, The New York Times, Aug. 3, 1998, at D4.

[459]*Id*.

[460]*See* http://broadcast.com.

[461]Richard Tedesco, *AHN to Stream Birth Live*, Broadcasting & Cable, Jun. 15, 1998, at 89; http://www.ahn.com.

[462]Richard Tedesco, *AHN to Stream Birth Live*, Broadcasting & Cable, Jun. 15, 1998, at 89.

[463]These programs can be viewed using either a RealNetwork's software package, or Microsoft Media streaming video package. *See* http://www.cnn.com; Richard Tedesco, *CNN Streams `Larry King,' `Crossfire'*, Broadcasting & Cable, May 25, 1998, at 28.

[464]International Film Channel, *IFC Will Host the First-Ever Broadband Premiere of a Full Length Feature Film* (press release), Oct. 28, 199; Alan Breznick, *The Broadband Content Frontier*, Cable World, Jul. 27, ,1998 at 32. Cable operators offering access to the IFC and Bravo "broadband sites" are Cablevision, Comcast, MediaOne, and Time Warner.

proper software and hardware.[465] Webcasters hope that streaming will eventually improve so that they can offer movies, sports, and television shows, but industry observers believe video streaming is unlikely to be compete with traditional video media in the foreseeable future.[466] Despite financial investments by firms such as Intel, Sony, US West, Comcast, Sun Microsystems, Oracle, Microsoft, and others, limitations in video streaming remain.[467]

2. Home Video Sales and Rentals

106. Previously, we stated that we consider the sale and distribution of feature film entertainment through video tape sales and rental outlets as part of the video programming market since they provide video services similar to the premium and pay-per-view services offered by MVPDs.[468] We also observed that premium and pay-per-view cable services are not regulated because they are competitive[469] and that the video rental industry is highly competitive.[470] It is estimated that 88% of all U.S. television households own at least one VCR.[471] There were approximately 27,000 video specialty stores in the U.S. selling or renting video tapes, with a large video store carrying as many as 10,000 titles.[472] This revenue stream is now the largest single source of revenue to movie studios, representing approximately $4.5 billion, or 45%, of the $9.9 billion of estimated domestic studio revenue in 1996.[473] Recently, Blockbuster and Hollywood Video, the two largest video retailers, began revenue sharing arrangements with the movie studios that lowered their costs in return for sharing rental revenues with the studios. For example, Blockbuster previously purchased video tapes

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[465]Richard Tedesco, *The Not Ready for Prime Time Medium*, Broadcasting & Cable, May 25, 1998 at 22.

[466]*Id*. RealNetworks, the leading developer and promoter of video streaming concurs with the notion that video streaming has a long way to go before it can compete with traditional video media.

[467]Richard Tedesco, *The Not Ready for Prime Time Medium*, Broadcasting & Cable, May 25, 1998, at 22-26. @Home takes the most popular content on the Internet and stores it locally for direct high-speed access allowing for faster connection to video and less latency. @Home however, only offers its customers 10 minutes of broadcast quality viewing time. At Home Corporation document to be cited.

[468]*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); *1994 Report*, 9 FCC Rcd at 7509-10 ¶¶ 134-135; *1995 Report*, 11 FCC Rcd at 2118-9 ¶ 121; *1997 Report* ¶¶ 103-104. *See also* Hollywood Entertainment Corp., SEC Form 10-K, filed March 31, 1998 ("Hollywood 10-K").

[469]*1997 Report*, 13 FCC Rcd at 1096 ¶ 103. Industry analysts state that the growth of DBS subscribership and further expansion in pay cable services provide competition for the video rental market (Communications Industry Forecast, Veronis, Suhler & Associates, Oct. 1998, at 207).

[470]*1997 Report*, 13 FCC Rcd at 1096-7 ¶ 104.

[471]*Consumer Electronics & the U.S. Economy*, Consumer Electronics Manufacturers Association, 1996.

[472]Hollywood Entertainment 10-K. The data in this filing are from Hollywood Entertainment, Adams Media Research, Paul Kagan Associates, Motion Picture Association of America, and the Video Software Dealers Association.

[473]*1997 Report*, 13 FCC Rcd at 1096 ¶ 103. *See also* Hollywood Entertainment 10-K.

through a distributor at $65 each. Now it buys tapes for one tenth that price directly from the movie studios and then gives about 40% of its rental revenue to the studios.[474]

107. Laser discs also provide a means for consumers to view video programming, especially movies. Introduced into the home video market in the early 1980s, laser discs, require their own laser disc players, deliver better quality pictures than video tapes and digital/compact disc ("CD") quality sound. Laser discs often have features not included on video tapes, such as original movie trailers and behind-the-scenes information. There are a large number of movies available on laser discs, with major movies released simultaneously on laser disc and video tape.[475]

108. In the future, laser discs are likely to be replaced by Digital Versatile Discs ("DVDs").[476] DVD technology was introduced in 1997,[477] and its increased availability has been the most significant development in the home video marketplace in the last year.[478] DVD technology provides picture and audio quality that is superior to that of video cassettes and offers many advanced features,[479] but discs are not yet available with recording capability.[480] Currently, DVD players are available from 15 manufacturers[481] and range in price from $395 to $1600, although prices are expected to drop as new models are introduced.[482] As of September 1998, over 700,00 DVD players had been sold, which represents a much faster acceptance rate than VCRs or CDs.[483] There are over 1000 movies now available on DVDs, ranging from contemporary to

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[474]David Segal, *Fast-Forward Deals: Blockbuster Video Thrives on Arrangements With Studios*, Washington Post, Sept. 15, 1998, at C1.

[475]CEMA website, http://www.cemacity.org/mall/product/comp/files/dvd.htm; Columbia Tri-star Home Video website, http://www.cthv.com/cgi-bin/CTHV.storefront/1467874676/Catalog/10006.

[476]http://www.cthv.com/cgi-bin/CTHV.storefront/1467874676/Catalog/10006.

[477]*1997 Report*, 13 FCC Rcd at 1097-8 ¶ 106.

[478]Veronis, Suhler & Associates, *Communications Industry Forecast*, Oct. 1998, at 211-12 .

[479]*1997 Report*, 13 FCC Rcd at 1097-8 ¶ 106.

[480]Daniel Greenberg, *Video Discontent: DVD Wants to Replace Videotape -- But is Divx Out to Replace DVD?*, Washington Post Weekend, Sept. 25, 1998, at 43. DVD players with recording capability were expected to be available in 1998, but at this point there are four incompatible formats under development and no indication whether a standard will be agreed upon by the industry. *Id.*

[481]http://www.cemacity.org/mall/product/comp/files/dvd.htm.

[482]Martie Zad, *The DVD Pitch: The Little Rascals are Gaining Traction*, Washington Post TV Week, April 12-18, 1998, at 5.

[483]Daniel Greenberg, *Video Discontent: DVD Wants to Replace Videotape -- But is Divx Out to Replace DVD?*, Washington Post Weekend, Sept. 25, 1998, at 42. DVD manufacturers sold 600,000 DVD players by June 1998, 16 months after they were introduced. By comparison, only 320,000 CD players were sold in the first 16 months after they were introduced and for VCRs the number was 515,000 for the first 16 months. Joel Brinkley, *DVD*

(continued...)

classic films, documentaries, animation and recorded concerts.[484] The price of movies in DVD ranges from $14.95 to $29.95.[485] They also can be rented at prices comparable to those of video cassettes.[486]

109. In September 1998, Digital Video Express ("Divx") was introduced nationwide.[487] Divx is a pay-per-view alternative for digital discs using a Divx-enabled DVD player that is connected to a phone line to forward playing and billing information to a central computer.[488] Twice a month the Divx player calls a toll-free number at Divx headquarters, sending data on what was watched and billing the consumer's credit card.[489] The consumer purchases a Divx video and is able to view the movie an unlimited number of times during the 48-hour period after it is first played. A video in Divx format sell for $4.49 for the first 48 hours of viewing.[490] After that time, the consumer pays approximately $3.25 for a second 48-hour viewing period.[491] Six consumer electronics manufacturers have agreed to make Divx-enabled DVD players,[492] which sell for approximately $400.[493] A limited number of retailers market Divx, including Circuit City, the good guys!, Ultimate

[483](...continued)
Leads Race for TV Disks, but It is Looking Over its Shoulder, New York Times, Jul. 6, 1998, at D1.

[484]http://www.cthv.com/cgi-bin/CTHV.storefront/1467874676/Catalog/10006.

[485]*Id*.

[486]Information based on survey of Washington area prices charged by Blockbuster Video, Hollywood Video, Tower Records, and Video Warehouse.

[487]Divx is owned by Circuit City and the Los Angeles entertainment law firm of Ziffren, Brittenham, Blanca & Fischer. Circuit City Stores, Inc., SEC Form 10-K, filed May 27, 1998. Circuit City holds approximately a two-thirds ownership interest in Divx. Circuit City Stores, Inc., SEC Form S-3 ("Circuit City S-3"), filed Jun. 10, 1998.

[488]*1997 Report*, 13 FCC Rcd at 1097-8 ¶ 106. See also Jerry Knight, *With CarMax Sputtering, Circuit City Limps Along*, Washington Post, Business, Aug. 17, 1998, at 7; Circuit City S-3.

[489]Daniel Greenberg, *Video Discontent: DVD Wants to Replace Videotape -- But is Divx Out to Replace DVD?*, Washington Post Weekend, Sept. 25, 1998, at 42.

[490]*Id*.

[491]*Id*.

[492]The manufacturers are Thomson Electronics, LG Electronics, Matsushita, JVC, Pioneer and Harmon Kardon. Circuit City S-3.

[493]Advertising insert, Washington Post, Oct. 4, 1998.

Electronics, SoundTrack, Audio King, Future Shop, Nationwide and Sixth Avenue Stores.[494] Divx currently has licensing agreements with six of the major movie studios.[495]

H. Local Exchange Carriers

110. Section 302(b)(1) of the 1996 Act eliminated the restriction on LECs providing video service directly to subscribers in their telephone service areas. This statutory change permits telephone companies to provide video services under one of several options. The specific options set forth in the Communications Act provide that common carriers may: (1) provide video programming to subscribers through radio communications under Title III of the Communications Act;[496] (2) provide transmission of video programming on a common carrier basis under Title II of the Communications Act;[497] (3) provide video programming as a cable system under Title VI of the Communications Act;[498] or (4) provide video programming by means of an open video system ("OVS").[499]

111. In previous *Reports*, we noted that LECs did not yet represent a national presence in the MVPD market, and that they were weighing their options for entry.[500] Generally, this is still true. The competitive presence of LECs in the video market, 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. RCN also is entering several markets as an OVS operator, sometimes in concert with local power utilities. In addition, Bell Atlantic and SBC are acting as agents for another MVPD, the DBS operator DirecTV, by marketing, selling, and installing DirecTV DBS video service.[501] The growth of the LEC competitive presence in the MVPD market will probably continue in the same manner as it has until now: deliberately, and by a number of different delivery mechanisms. Whether LECs will become nation-wide competitors to the cable industry is less clear.

1. Current and Planned LEC Video Delivery

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[494]The Digital Video Express Official Website, http://www.divx.com/introduction_home.htm. *See also* Circuit City SEC S-3.

[495]The studios are Disney, Paramount, Universal, Twentieth Century Fox, Metro-Goldwyn Mayer and Dreamworks SKG. Circuit City S-3.

[496]47 U.S.C. § 571(a)(1).

[497]47 U.S.C. § 571(a)(2).

[498]47 U.S.C. § 571(a)(3).

[499]47 U.S.C. § 571(a)(3)-(4).

[500]*1995 Report*, 11 FCC Rcd at 2110 ¶ 103, *1996 Report*, 12 FCC Rcd at 4394 ¶ 67, *1997 Report*, 13 FCC Rcd at 1099 ¶ 108.

[501]*See* para. 74 *supra*.

112. *MMDS.* At the time of the *1997 Report*, BellSouth and SBC Communications ("SBC") were the largest LEC investors in MMDS licenses and systems.[502] Since then, SBC has sold most of its interest in its digital MMDS system in Los Angeles and Orange County to PrimeOne, an affiliate of Prime Cable.[503] As a result, BellSouth is now the largest LEC investor in MMDS. Since the *1997 Report*, BellSouth has launched its digital MMDS service in Atlanta and Orlando, in addition to the service it already provided to New Orleans. BellSouth plans to launch digital MMDS service in Daytona Beach, Jacksonville, and Miami, Florida, and Louisville, Kentucky over the next two years.[504] In addition, in April 1998, GTE launched a digital MMDS system in Oahu, Hawaii.[505]

113. *In-Region Cable Franchises.* Ameritech continues to be the most aggressive of the LECs with respect to in-region cable service. Ameritech has acquired 87 cable franchises in Illinois, Michigan, Ohio, and Wisconsin, potentially passing more than 1.5 million homes, and it continues to seek new franchises. Seventy-two of these cable franchises were operational as of December 1, 1998.[506] Ameritech serves 200,000

[502] *1997 Report*, 13 FCC Rcd at 1100 ¶ 110.

[503] PrimeOne acquired a majority interest in Pacific Bell Video Services and the right to market the Tele-TV brand. Pacific Bell Video Services will be renamed PrimeOne Tele-TV. It appears that PrimeOne will expand the marketing of the system. SBC retains a 10% interest and plans a joint marketing agreement with PrimeOne Tele-TV to offer digital MMDS services to residential customers in Los Angeles and Orange County. *See* PrimeOne Tele-TV, *PrimeOne to Acquire Majority Stake in SBC's Wireless Video Operations* (press release), Sept. 30, 1998. *See also* Monica Hogan, *PrimeOne Buys PacBell Video*, Multichannel News, Oct. 12, 1998, at 1 and 98. MediaOne, a competitor to the Southern California Digital MMDS system, estimates that the system has 30,000 subscribers. MediaOne Comments at 7.

[504] BellSouth Comments at 3. In addition, BellSouth reports that its MMDS systems in Daytona Beach, Ft. Myers, and Jacksonville, Florida, and Louisville, Kentucky, which it acquired from analog MMDS operators, are still providing analog MMDS service, and will until they are upgraded to digital MMDS. Telephone interview with Thomson Rawls, Vice President and General Council, BellSouth Corp. (Sept. 24, 1998).

[505] GTE Media Ventures, *GTE Media Ventures Launches New All-Digital Wireless Video Service, Bringing New Jobs and a Clear Choice to Oahu Consumers* (news release), Apr. 23, 1998.

[506] The active franchises are located in: *Illinois*: Glendale Heights, Naperville, Glen Ellyn, Arlington Heights, Elgin, Prospect Heights, Des Plaines, Schaumburg, Streamwood; *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, Melvingdale, Royal Oak, Madison Heights, Warren, Trenton, Pleasant Ridge, Huntington Woods, Clawson, Berkley, Roseville, Eastpointe, Westland, Riverview, Taylor, Hazel Park, Center Line; *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. The franchises which have not yet begun service are located in: *Illinois*: Vernon Hills, Chicago (Area 5), Crestwood, South Holland, Oak Forest, Unincorporated DuPage County, Robbins; *Michigan*: Ferndale, Woodhaven, Rochester Hills, Harrison Township, Rochester, Shelby Township; *Ohio*: Brooklyn, Shaker Heights, Gahanna. Ameritech Corp., *Ameritech New Media Cable Franchises* (news release), Nov. 13, 1998.

subscribers through these systems as of November 1998,[507] and has become the 33rd largest MSO in the country.[508]

114. At the time of the *1997 Report*, BellSouth had acquired cable franchises in 18 areas in Alabama, Florida, Georgia, South Carolina, and Tennessee, giving it the potential of passing 1.2 million cable homes.[509] BellSouth now reports that nine of those franchises are offering service, and that it is negotiating with localities for further franchises.[510] GTE has signed ten competitive cable franchises, and one non-competitive franchise.[511] Of those, the non-competitive franchise in Cerritos, California, and the competitive franchises in Ventura County, California, and St. Petersburg and Clearwater, Florida, are operational.[512] As reported in the *1997 Report*, SNET has received a state-wide cable franchise in Connecticut, and offered service to Uniondale.[513] In addition to Uniondale, SNET now offers cable service in Darien, Farmington, Fairfield, Meriden, New Britain, North Haven, Norwalk, Old Greenwich, Wallingford, West Hartford, and Westport.[514] U S West, despite the separation of most of its cable operations into a separate company, discussed below, is operating video systems in Omaha, Nebraska, and Phoenix, Arizona. The cable system in Omaha was converted from U S West's video dialtone trial.[515] In Phoenix, U S West is using, for the first

[507]Ameritech Corp., *ex parte* meeting with the Cable Services Bureau, Dec. 9, 1998.

[508]NCTA, *Top 50 MSOs*, Cable Television Developments, Spring 1998, at 14 (*citing* Paul Kagan Associates, Inc. statistics).

[509]*1997 Report*, 13 FCC Rcd at 1101 ¶ 113.

[510]The active franchises are located in: Vestavia Hills, Alabama; St. Johns' County, Florida; Counties of Cherokee, Dekalb, and Gwinnett and Cities of Chamblee, Duluth, and Lawrenceville; and Daniel Island, South Carolina. BellSouth Comments at 2-3.

[511]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. Telephone interview with Bill Shaw, Federal Docket Manager, GTE (Sept. 9, 1997).

[512]GTE Corp., http://www.gte.com/c/Prods/americas.html. GTE reports that it has a 47% penetration rate in the 85,000 homes to which it has access, giving it approximately 40,000 subscribers. Linda Haugsted, *GTE Makes Inroads Vs. Cable in Calif.*, Multichannel News, Dec. 7, 1998, at 24.

[513]*1997 Report*, 13 FCC Rcd at 1101-02 ¶ 113.

[514]SNET Corp, http://www.snet.com/americast/amermain.htm. Press reports indicate that SNET has almost 19,000 subscribers spread across its service areas. *Conn. Regulators Unanimously Approve $4.4 Billion SBC-SNET Merger*, Comm. Daily, Sept. 3, 1998, at 2.

[515]Omaha, Nebraska, is one of the more competitive cable markets in the country, with three providers: U S West, Cox, and Douglas County Cable. Cox has 150,000 subscribers to U S West's 17,000 and Douglas' 4,500. U S West and Cox both also offer high-speed Internet access over their cable systems, making this one of the few markets with competition in that area also. Joe Estrella, *Cox-U S West Tee It Up*, Multichannel News, Oct. 27, 1998, at 1 and 58.

time anywhere or by anyone, very high speed digital subscriber Line ("VDSL") technology to deliver video programming, high-speed Internet access, and telephone service over existing copper telephone lines.[516]

115. Prior to the *1997 Report*, SBC acquired Pacific Telesis, and its Pacific Bell Video Services subsidiary. Subsequently, SBC ended its own in-region video efforts, sold its out-of-region systems, scaled back the video plans of Pacific Bell Video Services,[517] and, later, sold most of its interest in Pacific Bell Video Services.[518] SBC later acquired SNET,[519] and proposed to acquire Ameritech.[520] In front of the Senate's Antitrust Subcommittee, SBC Chairman Edward Whitacre would not commit to maintaining Ameritech's cable overbuild operation.[521] SBC, however, as a condition of approval of the SBC-SNET merger, promised the Connecticut Department of Public Utility to continue cable operations for two years. The Connecticut Department of Public Utility gave SBC the right to petition for modification of the state-wide franchise agreement once SBC studies SNET's cable operations.[522] Some have observed that since Ameritech has a well-established cable operation, one that has continued to expand even as the merger is pending, it is less likely that it will be sold or abandoned.[523] Some analysts also have pointed out that the Ameritech cable operation could become more important, in terms of offering a complete package of telecommunications services, in light of the pending AT&T-TCI merger.[524]

116. *Out-of-Region Cable Systems*. We previously reported that the last out-of-region cable systems owned by a LEC, those of Continental Cablevision (now MediaOne), owned by U S West, were to be

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[516]U S West Communications, *U S WEST Announces Nation's First Fully Integrated Digital TV and On-Line Service That Provides Cable TV Programming Over Existing Phone Lines* (news release), Apr. 20, 1998.

[517]*See 1997 Report*, 13 FCC Rcd at 1102-03 ¶¶ 114-15.

[518]PrimeOne Tele-TV, *PrimeOne to Acquire Majority Stake in SBC's Wireless Video Operations* (press release), Sept. 30, 1998.

[519]*See* SBC Communications, Inc., *SBC Communications Completes Southern New England Telecommunications Merger* (news release), Oct. 26, 1998.

[520]*See* SBC Communications, Inc., *SBC Communications and Ameritech to Merge* (news release), May 11, 1998; SBC Communications, Inc., *Southern New England Telecommunications to Merge with SBC Communications* (news release), Jan. 5, 1998.

[521]Testimony of SBC Chairman Edward Whitacre before the Senate Antitrust Subcommittee Hearing, May 19, 1998.

[522]*Conn. Regulators Unanimously Approve $4.4 Billion SBC-SNET Merger*, Comm. Daily, Sept. 3, 1998, at 2.

[523]Joe Estrella, *Will AT&T Deal Save Americast*, Multichannel News, Jul. 27, 1998 at 43, *citing* Mark Plakias, managing director of Strategic Telemedia and Bruce Leichtman, a media analyst with The Yankee Group.

[524]*Id. citing* Mark Plakias, managing director of Strategic Telemedia and Bruce Leichtman, a media analyst with The Yankee Group.

separated into an independent company by mid-1998.[525] This transaction was completed on June 12, 1998, so that the cable systems of MediaOne are no longer LEC out-of-region systems.[526]

117. *OVS.* Although OVS is one of four means for LEC entry into video, the OVS rules do not preclude other types of entities from using the OVS rules.[527] Currently, most of the firms receiving certification from the Commission as OVS operators are not LECs. The Commission has certified 11 OVS operators to offer OVS service in 17 areas.[528] One operator, MFS, however, withdrew its certifications in two areas, Boston and New York City, because it does not plan to operate open video systems in those areas.[529] Currently, Bell Atlantic in Dover Township, New Jersey,[530] and RCN in New York City and Boston[531] are the only operating open video systems, with no change since the last *Report*.[532] The Bell Atlantic video distribution system in Dover Township, however, which seemed likely at one time to be the prototype for telephone entry into the video business, will be terminated by the end of 1998 or very early in 1999. Pursuant to its joint marketing agreement with DirecTV, Bell Atlantic will give its Dover subscribers the opportunity to switch to DirecTV.[533]

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[525]*1997 Report*, 13 FCC Rcd at 1103 ¶ 115.

[526]MediaOne Group, *U S West Split-Off To Be Completed Before Midnight Tonight* (news release), Jun. 12, 1998.

[527]Currently, many of the provisions of the Commission's OVS rules are under appeal before the Fifth U.S. Appeals Court in New Orleans, in a consolidated appeal by local governments, the cable industry, and telephone companies. *National Cable Television Association, et al. v. Federal Communications Commission and United States of America*, No. 96-60844 (consolidated) (5th Cir.).

[528]For a complete listing of approved, pending, and denied applications for OVS certification, *see* http://www.fcc.gov/Bureaus/Cable/WWW/csovscer.html.

[529]*See Cable Services Bureau Action: Metropolitan Fiber Systems/New York, Inc. d/b/a MFS Telecom of New York Files Open Video Systems Certification Withdrawl*, FCC Public Notice (Sept. 17, 1998), DA 98-1995 and *Cable Services Bureau Action: Metropolitan Fiber Systems/McCourt, Inc. Files Open Video Systems Certification Withdrawl*, FCC Public Notice (Sept. 17, 1998), DA 98-1996.

[530]Bell Atlantic, *Bell Atlantic Now Offering Video Services in Dover Township New Jersey* (news release), Nov. 1, 1996.

[531]The system in Boston is affiliated with an unregulated subsidiary of Boston Edison Company. RCN Comments at i. These two systems reportedly have at least 63,000 subscribers. Cablevision, the incumbent cable operator in Boston, has filed a petition with the Massachusetts Department of Telecommunications and Energy, later joined by the Consumer Federation of America, claiming that Boston Edison has improperly subsidized the telecommunications network it is building with RCN. *See* Mike Farrell, *Cablevision Moves Vs. Boston Edison*, Multichannel News, Sept. 28, 1998, at 47. In addition, in the past year, RCN has expanded its New York City operation into Queens, essentially doubling its New York City territory. NCTA Comments at 29, *citing RCN Tries to Elbow Its Way Into Cable's Turf*, CableWorld, Jun. 8, 1998, at 20.

[532]*1997 Report*, 13 FCC Rcd at 1103-04 ¶ 117.

[533]Telephone interview with Marie Breslin, Bell Atlantic Director for FCC Regulations, Nov. 17, 1998. Bell Atlantic is offering financial incentives for its Dover customers to switch to its joint venture with DirecTV, and

(continued...)

Starpower, a joint venture of RCN and Potomac Electric Power Company ("PEPCO") in Washington, D.C., opened offices in March 1998, and is serving 20,000 customers with Internet access, local or long distance telephone service, or all three. These customers are in addition to 180,000 Internet customers acquired by purchasing the Internet service provider Erols Internet.[534] Starpower reports that it plans to begin video service before the end of the year and has signed agreements with Washington, D.C. and Gaithersburg, Maryland, allowing it to begin video service in those areas.[535]

118. *Barriers to Competition*. In its comments, BellSouth mentions several impediments to competition: (1) lack of "full and fair access to programming;" (2) long licensing processing delays for MDS and ITFS licenses; and (3) the stautory requirement that OVS operators make two-thirds of their capacity available to unaffiliated programmers. With respect to access to programming, BellSouth requests that Congress amend the programming access statute to apply to all programming, regardless of method of delivery or affiliation, and that Congress or the Commission prevent programmers from awarding what BellSouth terms discriminatory programming discounts to large MSOs.[536] BellSouth states that, "...the program access protections in the 1992 Cable Act are no longer adequate in light of the dramatic transformation of the marketplace over the past six years."[537] A number of commenters representing cable interests, however, disagree with BellSouth's position on program access, stating that expanding program access rules could damage the programming industry.[538] With respect to OVS, BellSouth requests that Congress relax the two-thirds capacity requirement for OVS, and give the Commission the authority to make this requirement more

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[533](...continued)
states that it will continuing operating the system until all customers who want to be are connected to another MVPD service.

[534]Michelle Rafter, *Telecom Power Play*, The Industry Standard, Jun. 24, 1998, at http://www.thestandard.net/articles/issue_display/0,1261,818,00.html.

[535]Starpower reached agreement with Gaithersburg, Maryland, on terms for providing OVS service in that locality, the first such agreement Starpower has signed in the Washington, D.C. area. (Starpower Communications, *Starpower Communications Receives City of Gaithersburg Approval to Offer Cable Television* (press release), Sept. 23, 1998.) Starpower later reached a separate agreement with Washington, D.C. to provide OVS service there, but will begin service in Washington, D.C. first. (RCN Corp., *Starpower Communications Signs Agreement To Become Washington's First Competitive Video Provider* (press release), Oct. 26, 1998.)

[536]*See* BellSouth Comments at 7-16. *See also* SBCA Comments at 3-6. The NRTC also recommended adding the possibility of financial penalties to program access enforcement. NRTC Comments at 13-17. In addition to echoing BellSouth's program access concerns, Ameritech also echoed BellSouth's concerns about license fee discounts afforded to large MSOs, and the secrecy which surrounds those discounts, which make it difficult for competitors to discover if they are being treated fairly. Ameritech Comments at 18-30. The SCBA agreed with these concerns and added that the ability of programmers to require joint and several liabilities allows some programmers to avoid dealing with cooperatives set up to gain discounts for small cable operators. SCBA Comments at 3-6. *See also* paras. 158-194 *infra*.

[537]BellSouth Comments at 13-14.

[538]Viacom Reply Comments at 4-5; NCTA Reply Comments at 11-13; Lifetime Reply Comments at 1-5; Comcast Reply Comments at 26-28.

consistent with the leased access requirement faced by cable operators.[539] Other comments on OVS include those of RCN, which states that it is subject to anticompetitive practices of incumbent cable operators, such as repeated filing of administrative complaints with local authorities and failure to follow the Commission's inside wiring regulations.[540] Cablevision, however, claims that RCN does not have a commitment to OVS and that RCN has used the OVS certification process to gain leverage in an attempt to become a cable operator.[541] Ameritech also cites the increase in horizontal integration and vertical integration, delays in the franchising process caused by incumbent cable operators, and shortcomings in the inside wiring rules as threats to emerging competition.[542]

2. *Video Programming and Packaging*

119. In the *1997 Report*, we reported that the two LEC joint ventures for providing original video programming and packaging of existing and original video programming, Tele-TV and Americast, had ended or been scaled back.[543] In the past year, PrimeOne acquired the Tele-TV brand and will use it to market the Southern California MMDS system it bought from SBC, under the name PrimeOne Tele-TV.[544] This joint venture, therefore is no longer LEC-owned or operated. Americast was originally set up to package programming, provide equipment, and market the MVPD offerings of Ameritech, GTE, SNET, SBC, and BellSouth.[545] Currently, Americast brand programming is offered by Ameritech, GTE, SNET, and BellSouth, but each member of Americast is marketing its own programming.[546]

I. Electric and Gas Utilities

120. Utilities have the potential to become major competitors in the telecommunications industry generally, and in the cable industry in particular. Utilities possess existing fiber-optic networks in many areas, and have access to public rights-of-way in the areas they serve. Utilities' provision of non-energy services may extend the value of their existing network and non-network assets. We reported last year that utilities use

[539]*See* BellSouth Comments at 20-23. RCN also agreed with the recommendation. RCN Reply Comments at 10.

[540]*See* RCN Comments at 10-17 and Reply Comments at 3-9. RCN also states that it has experienced difficulty reaching agreements with local authorities for rights-of-way for its open video systems. RCN Comments at 17-19.

[541]*See* Cablevision Reply Comments at 2-3.

[542]*See* Ameritech Comments at 30-38, 46-49.

[543]*1997 Report*, 13 FCC Rcd at 1105-05 ¶ 118.

[544]PrimeOne Tele-TV, *PrimeOne to Acquire Majority Stake in SBC's Wireless Video Operations* (press release), Sept. 30, 1998.

[545]*1996 Report*, 12 FCC Rcd at 4401-02 ¶ 78.

[546]*Id.*

communications networks for load management, thereby saving energy and reducing capital investment,[547] and that they may be able to use these networks to provide multichannel video and other services to derive additional revenue with proportionately low additional investment.[548] In addition, deregulation of utilities, accompanied by the advent of competition, has occurred or is going forward in most states, putting pressure on utilities to diversify and find new revenue streams. As we reported last year, industry observers consider utilities' reputations, long-term customer relationships and billing systems to equal those of telephone companies, thereby forming an appropriate foundation for the provision of non-energy services.[549] Thus far, however, utilities are not significant or nation-wide competitors in the cable television market.

121. Since the *1997 Report*, several utilities have announced, commenced, or moved forward with ventures involving multichannel video programming distribution. Tacoma City Light, the municipal utility in Tacoma, Washington, signed up its first cable customers and commenced service.[550] PEPCO has formed a joint venture with RCN, named Starpower, which is certified as an OVS operator in the Washington, D.C. area. Starpower reports that it plans to begin video service before the end of the year.[551] PEPCO is mainly providing its fiber optic backbone to the Starpower joint venture. Black Hills Corporation, an electric utility, announced plans to invest $40 million to provide telephone, cable television, and Internet access near Rapid City, North Dakota, in partnership with GLA International, a consulting and partnering firm.[552] Finally, residents in Coldwater, Michigan, voted in November 1997 to authorize construction of a municipal utility overbuild cable system, with service scheduled to begin this year.[553]

III. MARKET STRUCTURE AND CONDITIONS AFFECTING COMPETITION

A. Horizontal Issues in Markets for Video Programming

122. In this section, we examine several issues concerning horizontal structure and rivalry in markets for video programming. We are particularly interested in two video programming markets: the downstream (or "retail") market for delivery of video programming and the upstream (or "wholesale") market for acquisition of video programming. We first identify the market for the downstream delivered product and examine changes since the *1997 Report* in market concentration and the extent of competition in local markets.

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[547] *1997 Report*, 13 FCC Rcd at 1106-07 ¶ 121.

[548] *Id.*

[549] *Id.*

[550] Charles Paikert, *Tacoma Ready To Compete With TCI*, Multichannel News, Jul. 27, 1998, at 8 and 16.

[551] *See* para. 117 *supra*.

[552] Construction of this system is scheduled to take three years. *Comm Daily Notebook*, Comm. Daily, Sept. 18, 1998.

[553] Cable Telecommunications Association, *Municipal Ownership: An Ongoing Review of the Status of Municipal Ownership of Cable Television Systems...Or..."Look Before You Leap,"* May 14, 1998, http://www.CATAnet.org/general/wpmuni.html.

We then examine the extent of competition in the MDU markets. Lastly, we look at the upstream market and consider the changes in concentration at the regional and national levels.

1. Market Definition

123. As we explained in earlier reports,[554] the relevant market for examination of horizontal issues for both the downstream and upstream markets for video programming consists of two elements, a relevant product market and a relevant geographic market. In the downstream market, we use multichannel video programming services delivered to the customer as a starting point for the definition of the relevant product.

124. We found that in the downstream market, the relevant geographic area for assessing MVPD competition is local and its extent can be defined by the overlap of the service areas of the various service providers.[555] This area of overlap determines the potential MVPD choices available to a typical household or MDU.[556] We continue to believe that the relevant product market will depend on the substitutability or relative attractiveness (including the price, equipment, and installation charges) among the MVPD choices delivered to the household or MDU. For purposes of this *Report*, however, data availability limits our ability to identify more specifically the overlap areas in question or to measure the market shares of non-cable MVPDs in each individual local market across the country.

125. As explained in the *1997 Report*, in the upstream market for video programming, the buyers of video programming are MVPDs including cable operators and other video service providers, and the sellers are programmers.[557] This market enables MVPDs to buy programming for packaging and delivery to consumers. One competitive issue is whether cable operators acting alone or acting together can exercise market power in the purchase of video programming. This upstream market tends to be regional or national since programmers attempt to develop networks much broader than the local cable franchise area. Although cable operators usually do not compete to serve the same subscribers in local downstream markets, they may have an incentive to coordinate their decisions in the upstream market for the purchase of programming on a national or regional level. Concentration of ownership among buyers in this market is one indicator of the likelihood that coordinated behavior among buyers will be successful.[558] The more concentrated the market, the more likely that buyers will possess some market power (or "monopsony" power).

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[554]*See, e.g., 1997 Report*, 13 FCC Rcd at 1107-08 ¶¶ 124-25.

[555]*Id.* at 4418 ¶117.

[556]As we explained in the *1997 Report*, the relevant geographic market for MDUs may be defined as the city or a section of the city where: comparable MDU housing is available to MVPD customers, especially to potential customers moving into the area; landlords control access to the building (e.g., risers and hallways) and therefore determine the number of providers to each MDU; and bundled telecommunication services (e.g., video and telephony) tend to be offered since bundled unit costs are lower than the corresponding costs of serving residential customers. MVPDs able to offer service to MDUs in this area determine the potential choices available to MDUs. *See 1997 Report*, 13 FCC Rcd at 1107 ¶ 124

[557]*Id.* at 1108 ¶ 125.

[558]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.

2. Concentration in Local Markets

126. Local markets for the delivery of video programming (i.e., the downstream markets) continue to be highly concentrated and characterized by substantial barriers to entry by potential MVPDs.[559] In MDU markets, landlords may have a choice of more than one provider. In the *1997 Report*, however, we found that potential entry into MDU markets may be discouraged or limited by incumbent video providers that have negotiated long-term exclusive contracts.[560] Several commenters suggest that competing MVPDs continue to experience difficulties in obtaining quality programming, both from vertically integrated satellite cable programmers and from unaffiliated program vendors who continue to make exclusive agreements with cable operators.[561] If incumbent MVPDs can successfully limit new entry into their markets, there may be a tendency for prices to rise above competitive levels and for product quality, innovation, and service to fall below competitive levels in both household and MDU markets.

127. In order to obtain a summary measure of concentration in local markets for the delivery of video programming, we first consider the market shares held by cable and non-cable MVPDs in a hypothetical local market. The use of this hypothetical local market paradigm is due to the lack of readily available MVPD subscribership data for each local market. Using this approach, we assume that each local market is identical and reflects the market shares that each MVPD holds on a national basis. A second measure we use is the Herfindahl-Hirschman Index ("HHI").[562] Although cable operators continue to be dominant providers in most local markets, we estimate the HHI in a hypothetical local market to measure the influence of a growing competitive fringe of non-cable MVPDs and to provide a point of reference for assessing the degree of competition among MVPDs over time.

128. As in the last report, we find that downstream local markets for the delivery of video programming remain highly concentrated. Our approach uses the nationwide total number of subscribers to cable and non-cable MVPDs found in Table C-1, a surrogate for measuring the availability and attractiveness

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[559] *1994 Report*, 9 FCC Rcd at 7541 ¶ 201; *1995 Report*, 11 FCC Rcd at 2123-24 ¶ 132; *1996 Report* 12 FCC Rcd 4419 ¶ 118, and *1997 Report*, 13 FCC Rcd at 1121 ¶ 156.

[560] *1997 Report,* 13 FCC Rcd at 1108 ¶ 126.

[561] *See, e.g.*, Ameritech Comments at 2; BellSouth Comments at 7-16; RCN Comments at 10-11; WCA Comments at 5-8.

[562] As explained in the last *Report*, the HHI is a measure of horizontal 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. Its value falls with increasing numbers of firms but rises as the degree of inequality among firm size increases. 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 the four-firm or eight-firm concentration ratio. Thus, in cable markets, where the incumbent MSO is often the only cable provider, the HHI is limited in use. However, in MVPD markets, where noncable providers can be significant competitors in some local markets, the HHI is sensitive to differences in firm size.

The United States Department of Justice and Federal Trade Commission consider markets with an HHI below 1000 as "unconcentrated;" markets with an HHI between 1000 and 1800 as "moderately concentrated;" and markets with an HHI above 1800 as "highly concentrated." *1997 Report*, 13 FCC Rcd at 1109 n. 462.

of various options in the hypothetical local market.[563] In this hypothetical local market, as of June 1998, the shares of the market participants, grouped by competing technologies, would be roughly: cable, 85.3%; DBS/HSD, 12.1%; wireless cable, 1.3%; and SMATV 1.2%.[564] Continuing the trend found in the *1997 Report*, some non-cable MVPDs have increased their customer base, but it has not had a significant effect on cable subscribership.[565] DBS continues its expansionary trend of gaining new subscribers, but the market share of cable only decreased from 87.1% in June 1997 to 85.3% in June 1998. Using the market shares for each technology, the estimate of the HHI is 7015, a decrease from the HHI of 7567 for 1997.[566] Nevertheless, an HHI of 7015 remains several times greater than the 1800 threshold at which a market may be considered "highly concentrated."

3. Competitors Serving Multiple Dwelling Unit Buildings

129. The MDU market is an important segment in some local MVPD markets. MDUs comprise a wide variety of high density residential complexes, including high- and low-rise rental buildings, condominiums, and cooperatives. Townhouse and mobile home communities, nursing homes, hospitals and hotels may also represent important consumer segments in some local markets. As of 1990, there were almost 31.5 million "households" in MDUs in the U.S., comprising approximately 28% of the total housing units nationwide.[567] MDUs under 10 units account for 58% of MDU households, structures with 10 to 49 units account for 30%, and structures with more than 50 units account for 14% of MDU households.[568] Historically, cable and SMATV operators provided MVPD services to MDU subscribers.[569] More recently, however, DBS is beginning to supply programming to both SMATV providers serving MDUs and to MDUs directly.[570]

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[563]In this hypothetical local market, we assume that all MVPD services are in the product market and all MVPDs are in the geographic market. This may or may not be the case in specific local markets.

[564]*See* App. C, Tbl. C-1. For this computation, the DBS and home satellite dish ("HSD") figures in Table C-1 are combined since they both represent direct-to-home ("DTH") satellite services.

[565]*1997 Report*, 13 FCC Rcd at 1109 ¶ 128.

[566]To begin tracking the impact of overbuilders, the total number of cable subscribers reported in App. C, Tbl. C-1, was reduced by the number of subscribers served by overbuilders and a separate competing group of overbuilders was added. The number of subscribers served by overbuilders increased from approximately 520,000 in June 1997 to almost 750,000 by June 1998.

[567]U.S. Bureau of the Census,*American Housing Survey*, Tables 1-4 (1990). These figures exclude nursing homes, hospitals, and hotels which are not considered "housing units" by the Census Bureau.

[568]*Sizing Up the MDU Market*, Private Cable & Wireless Cable, Sept. 1998, at 28.

[569]*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).

[570]David Lester, Alex Qi, and David Lantz, *Bringing DBS Programming to Apartments and Condo Subscribers*, Private Cable & Wireless Cable, Sept. 1998, at 16; Jimmy Schaffler, *DBS in MDUs: A $5 Billion a Year Business by 2007*, Private Cable & Wireless Cable, Sept. 1998, at 32; and NCTA Comments at 34. *See also* Satellite Master (continued...)

130. In October 1997, the Commission adopted new inside wiring procedures directed at eliminating disputes over the control and usage of the wires necessary to reach each unit in a building. Key procedures adopted address: (a) the disposition of "home run" wiring; and (b) subscriber access to cable home wiring prior to termination of service.[571] The home run wiring is that part of the wire transmitting the video signal from the point the wire becomes dedicated to an individual unit in an MDU to the cable "demarcation point," which is located at or about 12 inches outside a unit. Generally, the home run wire is the portion of the wire extending down the hallway of an apartment building to the individual unit. The Commission's home wiring rules require that an incumbent MPVD who no longer has a legally enforceable right to remain in the building must expeditiously choose to sell, remove, or abandon the home run wiring. The rules cover circumstances where the MDU owner seeks a new provider for the entire building or where the MDU owner permits two or more providers to compete for subscribers on a unit-by-unit basis. According to the rules, consumers are permitted to provide or to install their own cable wiring inside their dwelling unit, or redirect, reroute or connect additional wiring to the cable operator's home wiring, as long as the cable operator's wiring is not substantially altered or harmed.[572]

131. In spite of the changes brought about by the inside wiring rules, commenters disagree about whether there has been any progress in terms of the ability to compete in the MDU market. Some commenters and industry observers believe that the new rules on inside wiring are very important in setting firm timetables by which a franchised cable operator must relinquish its wiring after being notified that the customer or property owner has chosen a competing provider.[573]

132. However, entrants raise several concerns about inside wiring and exclusive contracts that may hinder entry into MDU markets. One competitive concern is that the lack of access to inside wiring by alternative providers discourages entry.[574] The costs of duplicating the wiring may not be economic or a profitable alternative for some potential entrants.[575] Some commenters claim that the inside wiring rules should apply to all incumbent MVPDs whose service contracts would not be renewed if the inside wiring could be made available to a more desirable MVPD. The current rules only apply to a MVPD that no longer has a

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[570](...continued)
Antenna Systems, Section II.C. *supra*.

[571]*Telecommunicatins 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). The Commission also stated in the inside wiring proceeding that it will not preempt state mandatory access laws nor will it establish a federal mandatory access law.

[572]*Inside Wiring Order*, 13 FCC Rcd at 3661, 3759-65 ¶¶ 2, 216-230.

[573]*See, e.g.*, WCA Comments at 12-13; Antilles Comments at 4. Antilles, a wireless cable operator serving the Virgin Islands, claims that the inside wiring rules do not apply to hotels, which comprise a significant part of the MDU market in resort areas. *See also* D. Primosch, Esq., *FCC Takes Steps toward Cable TV Competition*, Private Cable & Wireless Cable, May, 1998, at 24.

[574]*See, e.g.*, DirecTV Comments at 10.

[575]DirecTV Comments at 15.

legally enforceable right to remain on the MDU premises.[576] Ameritech says that this is a rare situation, because many cable operators have perpetual MDU agreements for as long as they are franchised in the community. Also, "right of access" laws in many states give cable operators a legal right to remain on the premises.[577] According to Ameritech, these two conditions ensure that cable operators never lose their right to remain on the premises, which precludes competitors and new entrants from gaining access to the home run wiring.[578] Ameritech also states that even though the rules give MVPDs the option of removing the inside wiring, there is a disincentive because residents will be without service for a period of time between one MVPD's removal of the wiring and another's installation.[579] NCTA, on the other hand, claims that the Commission's rules remove any conceivable anticompetitive concerns.[580] To go any further would be unfair, according to the NCTA, since competitors would be relying on the prior investments and facilities of cable operators.[581]

133. Other commenters assert that the demarcation point may not be accessible because it is located behind sheet rock, and the MDU management will not permit the entrant to bore through sheet rock or to install molding to carry its wires.[582] Building managers also often reject a complete overbuild within the building due to the disruption to the building that an overbuild would cause.[583] Cablevision asserts that it does not see this as a problem because boring through sheet rock does not represent a significant modification of the building as would cutting through brick, metal conduit, or cinderblock.[584] NCTA asserts that the Commission's rules effectively remove such competitive concerns.[585] Other issues that the Commission has been asked to reconsider include (a) whether the incumbent should be required to make the home run wiring accessible at the same time as its initial remove, sell, or abandon election; (b) whether OVS providers should be eligible to use

[576]Ameritech Comments at 48-49.

[577]*Id*.

[578]*Id*. at 49.

[579]*Id*.; WCA Comments at 13-14.

[580]NCTA Comments at 14; *see also* MediaOne Comments at 13.

[581]NCTA Reply Comments at 14. In addition, NCTA, MediaOne, and SBCA claim that since DBS and SMATV providers are not subject to the same regulatory obligations as cable operators (*e.g*., pay franchise fees, provide PEG and leased access channels, and comply with must carry rules), such alternative providers have a competitive advantage over cable operators in winning the right to serve MDUs. *Id*. at 32; MediaOne Comments at 12-13; SBCA Comments at 8.

[582]RCN Comments at 14-15.

[583]*Id*.

[584]Cablevision Comments at 14.

[585]NCTA Reply Comments at 14.

existing home run wiring; (c) whether the Commission should preempt all state mandatory access statutes; and (d) whether a purchase price should be established for the home run wiring.[586]

134. In addition, the Commission issued a *Second Further Notice of Proposed Rulemaking* regarding whether there are circumstances where the Commission should adopt restrictions on exclusive contracts in order to further promote competition in the MDU marketplace.[587] According to DirecTV, exclusive contracts protect the incumbent cable operator from competition and therefore constitute a barrier to entry. The cable industry disagrees, arguing that the current rules are sufficient to remove any competitive concerns.[588]

135. Another competitive concern raised by entrants into MDU markets relates to the Commission's rules on over-the-air reception devices ("OTARD"). The OTARD rules, adopted on August 6, 1996, with some exceptions and conditions, generally prohibit certain governmental and nongovernmental restrictions on the installation of antennas one meter or less in diameter. The August 6, 1996 OTARD rules applied only to property within the exclusive use or control of the viewer where the viewer had a direct or indirect ownership interest in the property. Commenters urge the Commission to extend the OTARD rules to all renters and common property. Since these commenters filed these comments in this proceeding, on November 20, 1998, the Commission extended the OTARD rules to allow renters to install antennas within their leaseholds, i.e. apartments, homes, gardens, patios, terraces, and balconies. The Commission declined to extend the rules to permit the installation of antennas on common property or on property to which a viewer was not permitted access, such as the locked roof of an apartment building.[589]

136. *Firms Serving Primarily MDUs.* RCN, OpTel, and Cable Plus are the leading firms that specialize in serving high density local MDU markets.[590] RCN delivers video programming services using open video systems, wireless, and cable systems whereas OpTel and Cable Plus use SMATV technology. These firms plan to offer telecommunications services packages, including video programming, telephone, and Internet services. They also prefer to offer services under long term contracts with MDU owners.

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[586]*See, e.g., Inside Wiring Order*, Petitions for Reconsideration filed by Ameritech, BellAtlantic Corporation, Consumers Electronics Manufacturers Association, DirecTV, NCTA, Optel, RCN, Time Warner, and WCA.

[587]*Inside Wiring Order*, 13 FCC Rcd 3778-81 ¶¶ 258-68.

[588]NCTA Reply Comments at 14.

[589]*Section 207 of the Telecommunications Act of 1996/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, FCC 98-273 (rel. Nov. 20, 1998).

[590]Unless indicated otherwise, RCN and OpTel information in this MDU discussion is from the following sources, respectively: RCN Corp., Form 10-K, SEC File No. 000-22825 (filed Mar. 31, 1998) ("RCN Form 10-K, Mar. 31, 1998"); OpTel, Inc., Form 10-K (year ending Aug. 31, 1998), SEC File No. 333-24881 (filed Nov. 26, 1997) ("OpTel 10-K, Nov. 26, 1997").

137. In some markets, RCN is joining together with local electric utility and telephone companies to deliver video services using the utilities' fiber optic distribution lines.[591] As of March 31, 1998, RCN had approximately 15,600 subscribers to its OVS service, approximately 40,860 connections attributable to its wireless video systems, and approximately 187,000 connections attributable to its traditional cable systems.[592] In addition to its video programming delivery services, RCN offers full-featured local exchange telephone service, including standard dial tone access, enhanced 911 access, operator assisted services, and directory assistance, as well as a variety of value-added services such as call forwarding and call waiting, in competition with incumbent local exchange providers and other competing LECs. In the Washington DC metro area, the new bundled service is called "Starpower".[593] RCN also had approximately 3,200 telephone service connections on its advanced fiber optic networks (OVS systems) and approximately 40,000 customers for resold telephone service.[594] The company plans to offer service packages that include video programming, telephony, and Internet services.[595] As explained in last year's report, RCN typically enters into five- to ten-year access agreements with the owners/managers of MDUs.[596]

138. OpTel continues to expand its SMATV multichannel video programming services and telephone services offered to residents of MDUs.[597] As of May 31, 1998, the company had 217,100 cable television subscribers,[598] making OpTel the largest SMATV provider of video programming services in the United States. OpTel also has 7,700 telecommunications lines in service.[599] In two of its major markets, Houston and Dallas-Ft. Worth, the company now uses its own central office switch and its own transport network to provide facilities-based residential telephone service in competition with the incumbent LEC.[600] OpTel is now licensed as a competing LEC in each state in which it competes.[601] As indicated in the *1997*

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[591]Ross Kerber, *Cable-TV Giant Brawls with a Utility*, Wall Street Journal, Mar. 16, 1998, at B1; Eric Convey, *Edison/RCN Launches Cable Venture*, Boston Herald, Jun. 4, 1998, at 30; and Tony Munroe, Firm Offering One-Stop Shopping for Cable, Phone, Boston Herald, Aug. 14, 1996, at 24.

[592]RCN Comments at 4.

[593]*See* paras. 117 and 121 *supra*.

[594]RCN 10-Q, May 15, 1998, at 13.

[595]OpTel Comments at 9.

[596]*1997 Report*, 13 FCC Rcd at 1111 ¶ 132.

[597]OpTel Comments at 1-2; and OpTel 10-Q, Jul. 15, 1998, at 11. Private cable is discussed in paras. 88-94 *supra*. For regulatory purposes, OpTel is considered to be a private cable television operator in most of the markets it serves. For a description of OpTel's facilities, *see 1997 Report*, 13 FCC Rcd at 1112 ¶ 134.

[598]OpTel 10-Q, Jul. 15, 1998, at 11; *see also*, MediaOne Comments at 12.

[599]OpTel 10-Q, Jul. 15, 1998, at 11

[600]OpTel Comments at 1.

[601] OpTel currently operates in and plans to remain in Houston, Dallas-Ft. Worth, Chicago, Phoenix, San (continued...)

Report, OpTel provides services under ten- to fifteen-year contracts with MDU owners and institutions (e.g., hospitals and hotels), making OpTel an effective alternative to the incumbent LEC for telecommunications services in some markets.[602]

139. Cable Plus offers SMATV multichannel video programming services and security services to 90,000 customers in MDUs in 16 states, and also provides telephone service to 25,000 customers in 10 states.[603] MediaOne asserts that Cable Plus is one of the four SMATV operators that has established a national presence.[604] Cable Plus is exploring plans to offer telecommunications services packages including Internet access services. Like OpTel, Cable Plus attempts to negotiate long term contracts with MDU owners.[605]

140. The new entrants in MDU markets state that they have encountered extensive and systematic anticompetitive efforts on the part of incumbents in an effort to thwart their entry into the market. RCN provides a list of the alleged actions taken by Cablevision, the incumbent cable operator in both the New York City and Boston markets where RCN has sought entry.[606] RCN states that the significance of these efforts lies not so much in their individual effect, but in their pervasive and repetitious pattern. The company urges the Commission to play a more active role in fostering competition by establishing and enforcing ground rules that

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[601](...continued)
Diego-Los Angeles, San Francisco, Denver, Miami-Ft. Lauderdale. The company plans to divest its Tampa and Austin operations. *Id*. at 7-9.

[602]*1997 Competition Report*, 13 FCC Rcd at 1113 ¶ 135.

[603]Telephone interview with Darla Norris, Vice President-Finance, Cable Plus (Sept. 28, 1998) ("Cable Plus Interview").

[604]According to MediaOne, the other three leading SMATV operators are OpTel, One Point Communications (an SBS affiliate), and GE Rescom. MediaOne Comments at 12.

[605]*Id*.

[606]*Id*. at 10. RCN claims that Cablevision has: (1) obstructed efforts in New York to return Cablevision-owned set-top boxes for RCN's newly-acquired subscribers to obtain refunds for those customers; (2) filed a petition in Boston to block RCN arguing that it was not operating pursuant to a cable franchise agreement (RCN operates as an OVS provider in Boston); (3) refused to sell affiliated programming to RCN in the Boston market until RCN filed a complaint with the Commission; (4) initiated a formal adjudicatory proceeding at the Commission in an effort to gain access to proprietary and competitively sensitive data concerning RCN's Boston operations even though the Commission's rules permit an OVS operator to decline to provide such information to an in-region incumbent cable operator; (5) intervened in a similar formal complaint brought by Time Warner in an effort to gain access to RCN's proprietary OVS data; (6) intervened in a proceeding before the Massachusetts Department of Telecommunications and Energy ("DTE") alleging that RCN's OVS operation in Boston was improperly subsidized by a subsidiary of the Boston Edison Company (Boston Edison is a partner in RCN's Boston OVS operation); (7) filed a complaint with the DTE alleging that the pole attachment rates charged to Cablevision by a Boston Edison subsidiary were excessive; (8) intervened in another DTE proceeding regarding the funding of an unregulated subsidiary of Boston Edison; (9) filed a motion to reopen a DTE case (and stay the decision) that had already been decided in RCN's favor; (10) denied RCN access to distribution wiring in certain Boston MDUs in violation of the Commission's inside wiring rules.

will restrain such anticompetitive behavior. Moreover, RCN notes that both Cablevision and Time Warner have apparently invited the aid of other cable industry participants including state-level cable industry trade associations in this effort to impede RCN's competitive entry into their markets.[607]

141. *Cable Operator Services to MDUs*. Traditional franchised cable operators continue to compete for MDU business, and appear to be combining nonvideo telecommunications services with their multichannel video offerings to MDUs. For example, Cox Communications, the sixth largest MVPD, currently offers video programming and local digital telephone services to MDUs in Orange County and San Diego, California; Omaha, Nebraska; New England; Phoenix, Arizona; and Hampton Roads, Virginia.[608] Some cable firms offer price discounts for MDU service.[609] In New York City, for example, Time Warner offers a significant discount to MDUs where RCN is a competing provider.[610] Like other competing providers, cable operators attempt to negotiate contracts with MDU owners that provide for some form of exclusivity.

142. *LEC Service to MDUs*. Some LEC affiliates report that they are providing MVPD services to MDUs. During the year ending June 30, 1998, Ameritech reached agreements to provide cable television service to 442 MDUs (with 36,147 units) in communities in which it is a franchised cable operator.[611] Of the 620 MDUs (with 62,542 units) in these communities that have declined Ameritech New Media's cable television service, 322 MDUs (with 40,912 units), or approximately one-half, have cited their exclusive agreements with other cable operators as the reason for denying access to Ameritech.[612] In addition, Ameritech asserts that incumbent cable operators often raise spurious issues with the local franchising authority designed to delay the ability of Ameritech to gain a new franchise to enter a new market.[613] Others, like Bell Atlantic, are entering MDUs as agents of DBS providers.

143. *DBS Service to the MDU Market.* DBS currently offers video programming service to about 7.2 million subscribers[614] through four service operators. DirecTV, USSB, EchoStar and Primestar continue to increase their service to the MDU market.[615] As of June 1998, however, there are only approximately

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[607]*Id*. at fn. 45.

[608]Cox Comments at 15.

[609]Price discounts to MDUs are permitted under Commission rules. 47 C.F.R. § 76.984(c)(2); *see also 47* U.S.C. § 543(d).

[610]RCN Comments at 7-8.

[611]Telephone interview with George Callard of Ameritech New Media (Oct. 1, 1998).

[612]*Id.*

[613]Ameritech Comments at 47. Ameritech states that two recent examples of such problems have occurred in the City of Elgin and in the Village of Oak Lawn, Illinois.

[614]*See* App. C, Tbl. C-1.

[615]SBCA Comments at 4-5; Jimmy Schaffler, *DBS in MDUs: A $5 Billion a Year Business by 2007*, Private (continued...)

20,000 DBS MDU subscribers.[616] It has been estimated that within the next decade, nearly 90% of all MDUs in the U.S. will be able to receive DBS service.[617] That is, buildings will have been wired and have access to receiving antennas to some of the DBS satellites. DirecTV and USSB, for example, have been especially active in developing alliances with wireless cable operators, telephone operators, and SMATV operators.[618] In an MDU, DirecTV is combined with an over-the-air antenna or a limited basic cable service to receive local broadcast channels.[619] LECs such as Bell Atlantic are now able to enter MDU markets by offering programming packages delivered by DBS.[620] SBC and GTE have also entered the market as distributors of DirecTV and USSB.[621]

[615](...continued)
Cable & Wireless Cable, Sept. 1998, at 32-33.

[616]*Id*.

[617]Jimmy Schaffler, *DBS in MDUs: A $5 Billion a Year Business by 2007*, Private Cable & Wireless Cable, Sept. 1998, at 35. In addition, as mentioned above, in November 1998, the Commission extended the OTARD rules to allow renters to install antennas within their leaseholds. *See* para. 135 *supra*.

[618]Jimmy Schaffler, *DBS in MDUs: A $5 Billion a Year Business by 2007*, Private Cable & Wireless Cable, Sept. 1998, at 33.

[619]DirecTV Comments at 19.

[620]NCTA Comments at 27-28.

[621]SBCA Comments at 4.

4. Regional Concentration of Cable Systems

144. As we explained in the *1997 Report*, clustering, a process by which MSOs consolidate system ownership within separate geographical regions, can have both procompetitive and anticompetitive effects.[622] Clustering provides a means of improving efficiency, reducing costs, and attracting more advertising. Clustering also better positions cable as a potential competitor for local exchange services. It enables cable providers to offer a wide variety of broadband services at lower prices to customers in a geographic area that is larger than a single cable franchise area. For this reason, clustering makes cable providers a more effective competitor to LECs whose service areas are usually larger than a single cable franchise area. On the other hand, clustering can eliminate the most likely potential overbuilder. Another concern is that clustering may make the terrestrial delivery of regional video programming services feasible, thereby possibly preventing competitors from gaining access to vertically integrated programming.[623] Section 628 of the 1992 Cable Act is intended to prevent incumbent cable operators from denying competitors access to satellite delivered, vertically integrated programming. Terrestrially delivered programming, therefore, falls outside of the scope of the program access statute, although Congress could bring such programming within the scope of the law.[624]

145. Since the last 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.[625] During 1997, there were more than 100 such cable transactions.[626] Most of these transactions resulted in the expansion of existing clusters of cable systems or the creation of new clusters. In 1997, these transactions had a total market value of approximately $22.2 billion and involved approximately 11 million subscribers.[627] A similar pattern seems to be continuing in 1998.

146. The upward trend in the total number of clusters serving at least 100,000 subscribers observed in 1994, reached a peak in 1996, and began to decrease in 1997.[628] Although the total number of clusters declined from 139 at the end of 1996 to 117 at the end of 1997, the total number of subscribers associated with these clusters increased from about 33.6 million to 34.3 million between the end of 1996 and 1997.[629]

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[622] *1997 Report*, 13 FCC Rcd at 1115 ¶ 140.

[623] BellSouth Comments at 11-12; Ameritech Comments at 34; DirecTV Comments at 6-8.

[624] *See* Section IV.B.2. *infra*.

[625] *See* App. C, Tbl. C-4.

[626] *Id.* Between July and December of 1997, there are 71 transactions listed in Table C-4 of this year's report. Between January and June 1997, the *1997 Report* lists 46 transactions. *1997 Report*, 13 FCC Rcd at 1207-10.

[627] Paul Kagan Associates, Inc., *Cable TV System Sales 1997*, Cable TV Financial Databook, 1998, at 171.

[628] *See* App. C, Tbl. C-2.

[629] *Id.*

147. Although the total cumulative number of clusters actually decreased since the last report, the trend for clusters to increase in subscribership or size appears to be continuing. As we suggested in the last report, this tendency toward larger clusters may reflect greater economies of scale.[630] Between 1996 and 1997, the number of clusters and subscribers in the two smallest size categories, (100,000 to 199,000 and 200,000 to 299,000 subscribers), decreased, while the number of clusters and subscribers in each of the remaining three size categories either remained the same or increased. In the largest size category (over 500,000 subscribers), the number of clusters increased by 60% and the number of subscribers increased by 54.5%.

148. The plans of TCI, Time Warner, and the other large MSOs to consolidate and cluster their systems are changing the market structure of the cable industry. TCI continues to pursue its clustering strategy and has announced a number of substantial transactions with other MSOs in furtherance of this strategy. For example, in the Chicago metropolitan area, at the end of 1996 there were five cable operators with large subscriber bases, TCI, Time Warner, MediaOne, Jones, and Multimedia in addition to Ameritech, Prime, and Triax.[631] Since September 1997, TCI has announced a number of swaps and acquisitions through which it has gained control of the systems previously owned by Time Warner, MediaOne, Jones, and Multimedia that would allow TCI to control more than 90% of the Chicago metropolitan market.[632]

149. *System Mergers and Acquisitions*. Two of the biggest transactions, measured by number of subscribers, that have been announced since the last report involve Paul Allen, the co-founder of Microsoft. In April 1998, Allen announced his intention to acquire Marcus Cable, one of the top 10 MSOs, for about $2 billion plus $1 billion in debt.[633] It appears that Allen plans to use cable to gain access to the home in order to offer customers new services such as Internet access over the cable lines. Marcus's franchise areas are primarily in Alabama, Indiana, Southern California, Wisconsin, and Fort Worth, Texas.[634] In July 1998, Allen announced the acquisition of Charter Communications, another top 10 MSO, for approximately $4.5 billion.[635] Both Charter and Marcus serve the Southeast, but the systems are not tightly clustered. Charter's primary systems are in Los Angeles, Alabama, and Fort Worth, Texas. Together with the Marcus acquisition, the new

[630]*See* App. C, Tbl. C-2 for the total number of clusters and subscribers.

[631]Ameritech Comments at 35.

[632]Lorilyn Rackel, *TCI Takes Over in Local Cable Market*, Daily Herald, April 18, 1998, at 1.

[633]Leslie Cauley and Kara Swisher, *Billionaire Allen to Buy Marcus Cable*, Wall Street Journal, April 6, 1998, at A3.

[634]*Id*.

[635]John M. Higgins, *Allen's Big Buy Not His Last*, Broadcasting & Cable, Aug. 3, 1998, at 6.

still unnamed company will serve more than 2.4 million cable subscribers.[636] Both companies offer high-speed data services in the larger markets.[637] The combined companies will be run by Charter executives.[638]

150. *System Trades.* As discussed in the *1997 Report*, system-for-system "swaps" or trades enable MSOs to increase their regional clusters while minimizing financial outlays and avoiding capital gains taxes.[639] Since the last report, many of the largest proposed swaps, measured by number of subscribers, involve TCI. The largest proposed system-for-system swaps are between TCI and Time Warner, TCI and MediaOne, TCI and MultiMedia, and TCI and Insight.[640] TCI, for example, recently agreed to swap some of its systems in Florida, Hawaii, Maine, New York, Ohio, Texas, and Wisconsin with 598,000 subscribers for Time Warner systems with 540,000 subscribers in Illinois, Oregon, Missouri, New Jersey, Pennsylvania, and Texas. TCI also agreed to swap 508,000 subscribers in Southeast Florida and Georgia for 542,000 MediaOne subscribers in Chicago, Illinois.

151. *System Partnerships and Joint Ventures.* Since the last report, a number of joint ventures have been announced between TCI and other MSOs. In order to improve the management of its systems, lower its operating costs, and reduce debt from its balance sheet, TCI continues to form partnerships and joint ventures with other MSOs.[641] TCI's strategy is reflected in a number of deals in which it has reduced debt and traded non-clustered cable systems in exchange for equity stakes in other MSOs or partnership interests in joint ventures. These deals either involve ceding the systems to other operators, or forming joint ventures with other operators in order to combine some TCI systems with other MSOs' systems. For example, TCI and Time Warner propose to form a joint venture in Texas. Time Warner would manage the systems contributed by both TCI and Time Warner, which currently serve more than one million subscribers.[642] TCI would contribute 520,000 subscribers and Time Warner would contribute 510,000 subscribers. TCI has also agreed to form joint ventures with Century (comprising systems with 745,000 subscribers in California), Insight (comprising systems with 320,000 subscribers in Indiana), and Cox (comprising systems with 270,000 subscribers in Oklahoma).[643]

5. Concentration in the National Market

[636]Geraldine Fabrikant, *Microsoft Co-Founder to Buy 90% of Big Cable Company*, New York Times, Jul. 31, 1998, at C4.

[637]Linda Moss, *No. 7 -- With a Bullet*, Multichannel News, Aug. 3, 1998, at 1.

[638]John M. Higgins, *Allen's Big Buy Not His Last*, Broadcasting & Cable, Aug. 3, 1998, at 6.

[639]*1997 Report*, 13 FCC Rcd at 1118-19 ¶ 147.

[640]*See* App. C, Tbl. C-4. *See also* Paul Kagan Associates, Inc., Cable TV Investor, Apr. 30, 1998, at 11; Aug. 22, 1997, at 8; Sept. 10, 1997, at 4; Cable TV Finance, Jul. 31, 1997, at 8.

[641]*1997 Report*, 13 FCC Rcd at 1118 ¶ 148.

[642]*See* App. C, Tbl. C-4.

[643]*Id.*

152. As explained in the *1997 Report*, the 1992 Cable Act directs the Commission to place limits on the concentration of ownership of cable systems at the national level.[644] This direction reflects concerns that such concentration could have anticompetitive effects on the supply of programming to MVPDs and reduce the diversity of content available. It has been estimated that programmers need fifteen to twenty million subscribers to ensure long-term viability.[645] TCI, with 17.8 million subscribers, is the only MSO large enough to provide this number of subscribers on its own. Hence, new programmers almost invariably need to negotiate for carriage with multiple cable operators. The fewer operators a programmer needs to negotiate with, the lower the transactions costs of securing carriage. When the Commission recently maintained its 30 percent of homes passed horizontal cable ownership limit (while also asking for comments on its modification), it found that the ceiling made it unlikely that a single MSO or combination of two MSOs acting together could thwart entry by a new programmer.[646] This is not to say that a large MSO might have some bargaining power vis-a-vis programmers. Indeed, commenters raise concerns about dominant cable operators winning price concessions from programmers.[647] If such price concessions represent the market power of large MSO buyers, then new MVPD entrants in the downstream market for delivered video programming may not be as competitive with the large MSOs. On the other hand, our program access rules are designed to ensure that vertically-integrated cable programmers do not discriminate in pricing across MVPDs.

153. In assessing the impact that national concentration may have in the MVPD programming market, we believe that it is appropriate to consider the presence of all MVPDs and MVPD subscribers in national concentration figures, and not just cable MSOs and cable subscribers. As non-cable MVPD subscribership increases, the significance of DBS, MMDS, and SMATV operators in the MVPD program purchasing market also increases. For example, the continuing growth of DBS systems, such as DirecTV/USSB, Primestar, and Echostar, has resulted in all three non-cable providers being among the top eleven MVPDs nationwide.[648] Nevertheless, cable operators continue to be the main distributors of multichannel video programming, controlling 85.3% of total MVPD subscribers.[649]

154. The top four firms in the upstream MVPD nationwide programming market are TCI (with a share of 26.5%), Time Warner (with a share of 16.0%), MediaOne (with a share of 6.3%), and Comcast (with

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[644]*1997 Report*, 13 FCC Rcd at 1118-19 ¶ 149. *See also* Communications Act § 613(f)(1(A), 47 U.S.C § 533(f)(1)(A); *See also Implementation of Section 11(c) of the Cable Television Consumer Protection and Competition Act of 1992: Horizontal Ownership Limits*, MM Docket No. 92-264, Memorandum Opinion and Order on Reconsideration and Further Notice of Proposed Rulemaking ("*Horizontal Further Notice*"), 13 FCC Rcd 14462 (1998).

[645]*1997 Report*, 13 FCC Rcd at 1121 ¶ 155; and *Horizontal Further Notice*, 13 FCC Rcd at 14480 ¶ 44.

[646]*Horizontal Further Notice*, 13 FCC Rcd at 14478 ¶ 39.

[647]*See, e.g*., Ameritech Comments at 30-31 (Ameritech believes that price discounts granted to large MSOs, for example, is more widespread than the complaints filed or the Commission's rulings); and Bellsouth Comments at 14-15 (steep discounts granted only to large MSOs is a barrier to entry in MVPD markets).

[648]DirecTV/USSB is the fifth largest MVPD with 3.5 million subscribers; Primestar is the seventh largest MVPD with 2.1 million subscribers; and Echostar is the eleventh largest MVPD with 1.2 million subscribers.

[649]*See* App. C, Tbl. C-1.

a share of 5.8.%). The share of subscribers of these top four MVPDs, all MSOs, has changed little over the past year. In 1997, the four largest MVPDs (TCI, Time Warner, MediaOne, and Comcast) served 54.3% of all MVPD subscribers.[650] These same top four firms this year serve 54.6% of all MVPD subscribers nationwide.[651] As indicated, because these shares relate to the broader MVPD market rather than specifically to the cable market, they are different than the numbers relevant for horizontal ownership rule purposes. The current horizontal ownership rules measure concentration in terms of homes passed by a cable multiple system operator in relation to the total homes passed by the cable television industry rather than in terms of subscribers in relationship to the MVPD market as a whole. Based on the measurement and attribution rules used in the horizontal ownership rules, TCI estimates that its systems and those attributed to it will pass 35,192,000 homes[652] after consummation of the Cablevision, Falcon, and Insight transactions. Based on this information its systems and those attributed to it would pass approximately 37% of total homes passed by cable.

155. To assess the potential for market power resulting from concentration in the upstream MVPD programming market, the reported MVPD shares can be appropriately translated into HHI figures because MVPD programming networks are often purchased on a "per-subscriber" basis.[653] The nationwide purchaser MVPD HHI is 1096 -- "moderately concentrated" under the Merger Guidelines.[654] The HHI is 70 points lower than the HHI of 1166 reported in last year's report.[655]

156. The data on concentration in the cable market and in the MVPD market that we use does not include a number of transactions that have been announced but have not yet been consummated. The transactions involved are principally those discussed in the preceding section[656] involving systems owned or controlled by TCI that will be transferred to or managed by another system operator with a large cluster of other systems in the region.[657] However, if the arrangements are such as to create attributable interests, the result would be a significant increase in TCI's share of the national market.

157. To summarize, our reexamination of upstream national MVPD concentration currently reveals a relatively low level of concentration. Because programmers have an incentive to minimize transactions costs of securing access to the 15-20 million subscribers needed for viability, large MSOs have some bargaining power, especially vis-a-vis startup programming networks. However, no single MSO or pair of MSOs

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[650] *1997 Report*, 13 FCC Rcd at 1205, App. E, Table E-3.

[651] *See* App. C, Tbl. C-3. For purposes of this report, Primestar was included in TCI.

[652] Letter from Douglas G. dated September 29, 1998. This information was supplied to the Commission pursuant to paragraph 76 of the Commission's *Horizontal Further Notice*, 13 FCC Rcd at 14492 ¶ 76.

[653] 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.

[654] App. C, Tbl. C-3. The Merger Guidelines are summarized at fn. 562 *supra*.

[655] *1997 Report*, 13 FCC Rcd at 1205, App. F, Table 3.

[656] *See* para. 141-151 *supra*.

[657] *See* App. C, Tbl. C-4.

currently control a large enough share of cable subscribers to be able to block entry by a new programmer. In downstream local markets for delivered video programming, our concentration estimates continue to suggest that local markets remain highly concentrated.

B. VERTICAL INTEGRATION AND OTHER PROGRAMMING ISSUES

1. Status of Vertical Integration

158. This section addresses the extent to which video programming services are affiliated with cable operators.[658] As we have noted in previous reports, vertical relationships can have beneficial effects,[659] although under certain market conditions, strategic vertical restraints (achieved by exclusive distribution contracts or monopsonistic pressure) can also deter entry and competition in the video marketplace, and can limit the diversity of cable programming, reducing the number of voices available to the public.[660]

159. Since the *1997 Report*, the number of both vertically and non-vertically integrated national satellite-delivered video programming services has increased significantly.[661] This year, of the 245 national satellite-delivered video programming services identified, 95 (39%) are vertically integrated with at least one MSO and 150 (61%) are not.[662] We note that, in addition to the national satellite-delivered video programming services discussed in this Report, there are also regional video programming services, some of which are vertically integrated with MSOs. In the *1997 Report* we reported that, of the 172 national satellite-delivered

[658]Vertical integration occurs where a cable system (a video programming service distributor) has an ownership interest in a video programming service supplier or vice versa.

[659]Such beneficial effects can include efficiencies in the production, distribution and marketing of video programming, as well as incentives to expand channel capacity and to create new programming by spreading the risk inherent in program production ventures. See e.g., H.R. Rep. No. 862, 102nd Cong., 2d Sess. 56 at 41-43 (1992).

[660]*1995 Report*, 11 FCC Rcd at 2135 ¶ 158; *Vertical Ownership Limits*, MM Docket 92-264, Memorandum Opinion and Order on Reconsideration of the Second Report and Order, 10 FCC Rcd 7364, 7365 ¶ 4 (1995).

[661]For this *Report*, with the emergence of new digital packages, we have re-examined existing families of programming services and multiplexed packages so as to identify all known video programming services. Previous reports may not have identified the full array of programming services offered by certain programming families or in certain multiplexed packages due to the limited availability of data or conflicting manners in which data were set forth in resources used by the Commission. In this *Report*, we count each unique programming service of a multiplexed package separately. For example, we count seperately the unique programming services of Canales ñ, TCI Liberty's digital package of Spanish-language channels. Canales ñ consists of Discovery en Español, Fox Sports Americas, CNN en Español, CBS Telenoticias, CineLatino, BoxTejano, BoxExitos, Canal 9 and eight channels of DMX Latino-formatted digital music. We do not count seperately services that are not unique, as in a multiplexed programming service made up of a single programming service that is merely time shifted.

[662]App. D, Tbls. D-1-2. We note that vertical integration in the cable industry transcends the national satellite-delivered video programming services discussed in this *Report*. The Commission has identified 61 regional video programming services, some of which also are vertically integrated with MSOs. *See* App. D, Tbl. D-3.

video programming services identified, 68 (40%) were vertically integrated and 104 (60%) were not.[663] Most of the increase can be attributed to new digital programming packages recently launched. For instance, TCI/Liberty's Canales ñ is a new digital package of eight unique video programming services and the recently launched TVN Digital Cable offers 35 unique video programming services comprised of three analog channels and a digital package of 32 channels.

160. While the number of vertically integrated programming services has increased since the *1997 Report*, the percentage of vertically integrated programming, relative to the total number of national, satellite-delivered programming services, has decreased slightly to 39%. This continues a four-year decline in the percentage of vertically integrated programming. The *1997 Report* reported that 40% (68 of 172) of national satellite-delivered video programming services were vertically integrated;[664] the *1996 Report* reported that 46% (67 of 147) of national satellite-delivered video programming services were vertically integrated;[665] the *1995 Report* reported that 51% (66 of 129) of national satellite-delivered cable programming services were vertically integrated;[666] and the *1994 Report* reported that 53% (56 of 106) of national satellite-delivered video programming services were vertically integrated.[667]

161. Overall vertically integrated ownership interests have increased in recent years. In 1998, cable MSOs, either individually or collectively, owned 50% or more of 78 national video programming services. In 1997, cable MSOs owned 50% or more of 50 networks. In 1996, cable MSOs owned 50% or more of 47 national cable programming networks.[668]

162. In 1998, 29 of the 50 most subscribed to video programming services are vertically integrated.[669] In addition, two other top 50 services (C-SPAN and C-SPAN2), while not directly owned by cable operators, were developed with significant involvement by the cable industry.[670] In 1997, 26 of the 50 most subscribed to video programming services were vertically integrated.[671] In 1998, in terms of prime time

[663] *1997 Report*, 13 FCC Rcd at 1213-1221 App. F, Tbls. 1-2.

[664] *Id.*

[665] *1996 Report*, 12 FCC Rcd at 4509-4516 App. G, Tbls. 1-2.

[666] *1995 Report*, 11 FCC Rcd at 2132 ¶ 150.

[667] *1994 Report*, 9 FCC Rcd at 7522 ¶ 161.

[668] *Compare 1996 Report*, 12 FCC Rcd at 4509-12 App. G, Tbl. 1; *1997 Report*, 13 FCC Rcd at 1213-1216 App. F, Tbl. F-1 *with infra* App. D, Tbl. D-1.

[669] App. D, Tbl. D-6.

[670] C-SPAN and C-SPAN2 are non-profit cable networks, receiving funding through system operators and other MVPDs that provide support on a per-subscriber basis.

[671] *1997 Repor*t, 13 FCC Rcd at 1231-1233 App. F, Tbl. F-6.

ratings, nine of the top 15 video programming services are vertically integrated, whereas seven of the top 15 services were vertically integrated in 1997 and eight of top 15 were vertically integrated in 1996.[672]

163. Vertical integration in national cable programming continues to involve principally the largest cable system operators. Ownership interests in each of the 95 vertically-integrated services are held by any one of seven of the nation's eight largest cable MSOs.[673] Many of these programming services are jointly held by multiple MSOs. TCI, the largest MSO, holds ownership interests in 28% (67 of 242) of all national programming services. In 1997, TCI held ownership interests in 23% (39 of 172) of all national programming services. In 1996, TCI held interests in 23% (34 of 147) of all national programming services.[674] Time Warner, the nation's second largest MSO, holds ownership interests in 12.5% (30 of 240) of all national programming services; in 1997 it held interests in 11.6% (20 of 172) of national programming services. Time Warner's ownership interests were slightly greater in 1996, when it held interests in 15% (22 of 147) of all national programming services.[675]

164. The data set forth above generally identifies vertical ownership relationships by reference to the ownership attribution standards associated with the Commission's horizontal and vertical (channel occupancy) rules.[676] For these purposes, equity interests that carry no present voting rights are not considered to be attributable. For other purposes, such as the program access rules, a more inclusive standard is employed so that any stock interest, voting or nonvoting, creates a cognizable ownership interest.[677]

165. Within the context of vertical ownerships in the cable industry, we also note the following horizontal relationships. TCI has a 10% ownership interest in Time Warner, Inc. and all of its subsidiaries, including a 10% ownership interest in Time Warner Cable -- the nation's second largest MSO -- and a 10% ownership interest in Time Warner/Turner programming services. MediaOne, the third largest MSO, has a 25% ownership interest in Time Warner Entertainment, L.P., which includes a 25% ownership interest in Time Warner Cable. Furthermore, Comcast Corporation, the nation's fourth largest MSO with 4.5 million subscribers, will soon acquire Jones Intercable, the nation's eighth largest MSO with 1.5 million subscribers, in a deal expected to be finalized in early 1999.[678]

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[672]*Compare 1996 Report*, 12 FCC Rcd at 4528 App. F, Tbl. F-7; *1997 Report*, 13 FCC Rcd at 1234 App. F, Tbl. D-7 *with infra* App. D, Tbl. D-7.

[673]App. D, Tbl. D-5.

[674]*Compare 1996 Report*, 12 FCC Rcd at 4509-12 App. F, Tbl. F-1 *1997 Report*, 13 FCC Rcd at 1213-16 App. F, Tbl. F-1 *with infra* App. D, Tbl. D-1.

[675]*Compare 1996 Report*, 12 FCC Rcd at 4509-12 App. F, Tbl. F-1 *1997 Report*, 13 FCC Rcd at 1213-16 App. F, Tbl. F-1 *with infra* App. D, Tbl. D-1.

[676]*See* 47 C.F.R. § 76.503, 47 C.F.R. § 76.504.

[677]*See* 47 C.F.R. § 76.1000(b).

[678]Kent Gibbons, *Glenn Jones Cashes In Now*, Multichannel News, Aug. 17, 1998, at 1.

166. In a recent *Notice of Proposed Rulemaking* ("*Attribution Notice*"), the Commission initiated a review of its cable attribution rules which define what constitutes a "cognizable interest" that triggers application of various Commission rules relating to the provision of cable television services.[679] The attribution rules seek to identify financial, ownership and other business relationships that confer on their holders a degree of ownership or other economic interest, or influence or control over providers of communications services such that the holders should be subject to the Commission's regulation.[680] The Commission initiated the *Attribution Notice* in light of recent developments in the cable industry, including numerous strategic alliances, partnerships, system swaps, and mergers and acquisitions among cable entities; various Commission proceedings related to the issue of cable ownership; and the Commission's review, in a separate proceeding, of the broadcast attribution rules on which many of the cable attribution rules were based.[681] The purpose of the *Attribution Notice* is to examine whether current cable attribution rules are accomplishing the goals of ensuring a competitive, diverse and fair video marketplace; and to determine whether fewer, additional or different restrictions are warranted.

167. In a related proceeding, the Commission recently released a *Second Memorandum Opinion and Order on Reconsideration and Further Notice of Proposed Rulemaking* ("*Horizontal Further Notice*") regarding the Commission's cable television horizontal ownership rules.[682] In the *Horizontal Further Notice*, the Commission maintained the current 30% horizontal ownership limit and denied the motion to lift the voluntary stay on enforcement of that limit.[683] However, in order to facilitate monitoring of cable ownership interests, the Commission lifted the voluntary stay insofar as it applies to the information reporting requirements of 47 C.F.R. § 76.503(c).[684] The *Horizontal Further Notice* sought comment on possible revisions of the horizontal ownership rules and the method by which horizontal ownership is calculated.[685] Specifically, the Commission asked in the *Horizontal Further Notice* whether changes are needed to provide a more accurate measure of horizontal concentration to reflect changes in the market as alternative MVPDs continue to grow in the future.[686]

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[679]*Review of the Commission's Cable Attribution Rules, Implementation of the Cable Television Consumer Protection and Competition Act of 1992*, CS Docket No. 98-82, Notice of Proposed Rulemaking ("*Attribution Notice*") 13 FCC Rcd at 12990 (1998).

[680]*Attribution Notice*, 13 FCC Rcd at 12990 ¶ 1.

[681]*See Review of the Commission's Regulations Governing the Attribution of Mass Media Interests*, MM Docket Nos. 94-150, 92-51 and 87-154, Notice of Proposed Rulemaking, 10 FCC Rcd 3606 (1995); *Regulations Governing Attribution of Broadcast and Cable/MDS Interests, Regulation and Policies Affecting Investment in the Broadcast Industry and Reexamination of the Commission's Cross-Interest Policy*, MM Docket Nos. 94-150, 92-51 and 87-154, Further Notice of Proposed Rulemaking, 11 FCC Rcd 19895 (1996).

[682]*Horizontal Further Notice*, fn. 644 *supra*. *See also* paras. 152-157 *supra*.

[683]*Horizontal Further Notice*, 13 FCC Rcd at 14464 ¶ 3.

[684]*Id.*

[685]13 FCC Rcd at 14464-65 ¶ 4.

[686]*Id.*

168. The Commission has identified 65 planned national programming services that are expected to launch in the near future. This generally correlates with the 77 planned services reported in the *1997 Report* and the 63 prospective services reported in the *1996 Report*.[687] Most of the planned programming services do not have a satellite transponder for cable distribution nor a scheduled launch date.[688] Many of these services have been in the planning and development stage for over a year, and have thus been listed as planned programming services in previous *Reports*.

169. In recent years there has been a general trend by existing programming service providers, regardless of whether they are vertically integrated with MSOs, to create derivative programming services or brand extensions of their programming offerings. For example, in October 1996, The Discovery Channel, which is affiliated with TCI and Cox Communications, launched several new networks, including Animal Planet, Discovery Civilization, Discovery Kids, Discovery Science, and Discovery Travel and Living. This year, TCI launched Canales ñ, a digital package of eight audio and eight video Spanish-language channels which includes derivatives of four of TCI's existing programming services -- Discovery en Español, Fox Sports Americas, CNN en Español and CBS Telenoticias. Viacom, a major program provider that is not affiliated with any MVPD, has also utilized derivative programming and brand extension approaches. Viacom's MTV launched M2 in 1996, and Viacom has since announced that it will launch three new programming services in January 1999 -- Nickelodeon Game & Sports, Nick Too, and Noggin. Another non-vertically integrated program provider is Lifetime Television. On June 29, 1998, Lifetime launched a new network, the Lifetime Movie Network ("LMN"). LMN is a 24-hour, basic cable network which airs made-for-television movies and theatrical films targeted to women.[689]

2. Other Programming Issues

170. In addition to information on national programming services, the Commission's *Notice* in this proceeding requested comment on other programming issues. We sought comment on whether there are certain programming services (i.e., "marquee" program services) or specific classes of service (e.g., movie, sports or news channels) that an MVPD needs to provide to subscribers in order to be successful. In addition, we requested information on electronic programming guides offered by cable operators and other MVPDs. We also sought information on the extent to which MVPDs are now offering or plan to offer consumers discrete programming choices (i.e., service on an "a la carte" or individual channel basis) rather than programming service packages (i.e., tiers of programming services). Moreover, we sought information and comment regarding public, educational and governmental ("PEG") access and leased access channels; and information and analysis regarding the effect of increased programming costs on rates, especially for cable service. Finally, commenters were asked to provide information regarding the effectiveness of the Commission's program access rules.

171. *Sports Programming*. Sports programming in the market for the delivery of video programming increasingly warrants special mention because of its widespread appeal and strategic significance

[687]*Compare 1996 Report*, 12 FCC Rcd at 4517-20 App. F, Tbls. 3-4; *1997 Report*, 13 FCC Rcd at 1222-25 App. F, Tbls. F-3, F-4 *with infra* App. D, Tbl. D-4.

[688]*New Network Handbook--Programming '98*, Cablevision, Mar. 16, 1998, at 48.

[689]Lifetime Reply Comments at 2.

for MVPDs. In this *Report*, the Commission identifies 29 regional sports programming networks.[690] Ameritech states that sports programming is marquee programming for MVPDs.[691] Increasingly, cable operators have acquired interests in the sports industry which, Ameritech asserts, gives operators leverage with respect to competitors' access to sports programming.[692] Ameritech has previously stated that access to sports programming is so essential to the success of a cable system that many operators will pay exorbitant prices and agree to entertain other less attractive business arrangements just to obtain it.[693]

172. ESPN, a programming service of Disney, is one of the most successful cable programming services in terms of circulation and revenues, and has been the principal supplier of national sports programming for cable television and MVPD distribution.[694] Cablevision and News Corp./TCI Liberty Media ("Fox/Liberty") have created Fox Sports Net, a national network of 20 regional Fox Sports outlets that is seen as a viable competitor to ESPN.[695] Some of the Fox Sports channels are former Cablevision SportsChannel services, and all are currently held in various measures by TCI's Liberty Media, News Corp. and Cablevision. In contrast to ESPN's national programming, Fox Sports Net offers home games to viewers in local markets and supplements these with national programming,[696] and provides national and regional advertisers with a "one-stop-shopping" vehicle to reach sports viewers across the country.[697] Fox/Liberty also has an ownership interest in Cablevision's other sports businesses and networks, including the Madison Square Garden Network, the Madison Square Garden arena complex, and the New York Knicks National Basketball Association ("NBA") and Rangers National Hockey League ("NHL") teams.[698]

173. Further, in July 1996, Comcast Corporation ("Comcast") acquired a 66% interest in the Philadelphia Flyers L.P. to form a new partnership named Comcast-Spectacor.[699] Comcast-Spectacor owns the following sports assets: 1) the Philadelphia Flyers NHL team; 2) the Philadelphia 76ers NBA team; and

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[690]App. D, Tbl. D-3.

[691]Ameritech Comments at 38.

[692]*Id.* at 39.

[693]1997 Ameritech Comments at 38.

[694]ESPN reaches 75 million cable and satellite subscribers and is expected to record nearly $2 billion in revenue and more than $600 million in operating profit for 1998. *See* David Lieberman, *Disney's Kingdom Counts on Bounty from Sports*, USA Today, Oct. 7, 1998, at B1.

[695]R. Thomas Umstead, *Fox Builds Sports Empire*, Multichannel News, Jun. 23, 1997 at 1; and R. Thomas Umstead, *Ops Eye Low-Cost Local Heroes*, Multichannel News, May 4, 1998, at 74.

[696]Mark Landler, *Sports Networks Ready to Rumble*, New York Times, Sept. 28, 1997, Week in Review at 3.

[697]Liberty Media Press Release, *Cablevision's Rainbow Media and Fox/Liberty Complete Transaction to Create Sports Partnership*, Dec. 18, 1997, at 1.

[698]*Id.*

[699]*See Memorandum Opinion and Order In the Matter of DirecTV, Inc. Complainant, v. Comcast Corporation, Comcast-Spectacor, L.P., Comcast SportsNet, Defendants*, DA 98-2151 (rel. Oct. 27, 1998) at ¶ 7.

3) the CoreStates Spectrum and CoreStates Center sports arenas.[700] Also in 1996, Comcast Spectacor entered into a joint venture agreement with the Philadelphia Phillies Major League Baseball ("MLB") team to create SportsNet.[701] SportsNet supplies cable television sports programming in the Philadelphia area, and also has access to programming produced by Fox Sports Net. Comcast acquired the Philadelphia 76ers NBA and Philadelphia Flyers NHL teams to anchor programming for SportsNet.[702]

174. With a few exceptions, Fox/Liberty and other smaller regional networks have programming contracts with most professional sports teams, including 25 of 30 Major League Baseball ("MLB") teams, and 26 of 29 NBA teams.[703] In addition, Fox/Liberty shares the current television rights for 19 of 26 NHL teams with ESPN.[704] Fox/Liberty and ESPN also have exclusive television rights to most major college conferences for football and basketball. While the availability of national and regional sports programming has increased, some in the industry have stated that its high cost contributes to higher cable television programming rates.[705] ESPN recently signed a $600 million, five-year agreement with the NHL to broadcast up to 200 NHL games per year, as well as the first two games of each year's Stanley Cup Finals.[706] This is more than double the cost of the current package shared by ESPN and Fox/Liberty which expires after the 1998-1999 season.[707] Earlier this year, ESPN imposed a 20% rate increase to cable operators shortly after announcing its $600 million, eight-year broadcast deal with the National Football League ("NFL"). ESPN has not yet set an overall rate for 1999, but some cable operators are concerned that ESPN will pass along NHL fees in the 1999 rate to be determined.[708]

175. Some cable operators would like to start their own sports services to target local sports programming, such as high school football and minor league baseball, due to the high cost and low availability of remaining marquee sports programming.[709] This local programming gives operators a brand identity in their

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[700]*Id.*

[701]*Id.*

[702]R. Thomas Umstead, *Ops Eye Low-Cost Local Heroes*, Multichannel News, May 4, 1998, at 74.

[703]*Id.*

[704]R. Thomas Umstead, *ESPN Lands $600M NHL Deal*, Multichannel News, Aug. 31, 1998, at 10.

[705]Testimony of Decker Anstrom, NCTA President, at the Dec. 18, 1997 Commission meeting; Kagan Media Appraisals, Inc., *TV Programming Costs -- An Analysis of the Market Forces Driving Entertainment and Sports Rights Fees*, Dec. 1997.

[706]R. Thomas Umstead, *ESPN Lands $600M NHL Deal*, Multichannel News, Aug. 31, 1998, at 10.

[707]*Id.*

[708]*Id.* at 56.

[709]R. Thomas Umstead, *Ops Eye Low-Cost Local Heroes*, Multichannel News, May 4, 1998, at 74.

respective communities with which to compete against rival MVPDs.[710] Local sports also holds value for operators because local sporting events often generate higher ratings than other cable and broadcast programming.[711]

176. *News Programming.* Another form of regional programming that is experiencing growth is news-oriented programming. There are approximately 25 local and regional news networks in the United States.[712] These news services compete for ratings with national news networks such as CNN as well as broadcast news programs in their markets.[713] The typical content of most local and regional news programming services is local or regional news and information, while other services may primarily showcase public affairs programming or local and regional government assembly sessions. Cablevision Systems Corp. has developed the concept of local news programming further by launching three "hyperlocal" channels in the New York designated market area ("DMA").[714] These three hyperlocal channels -- MSG Metro Guide, MSG Traffic and Weather, and MSG Metro Learning Channel -- offer localized "neighborhood" programming content.[715]

177. *PEG Programming.* Pursuant to Section 611 of the Communications Act, local franchising authorities may require cable operators to set aside channels for PEG use.[716] PEG access centers throughout the nation currently produce over 1,000,000 hours of original programming per year for cable system distribution,[717] although only 16% of cable systems carry PEG stations of any kind.[718] Cable operators do not have ownership interests in PEG access programming, though under some franchise agreements, they may provide services, facilities and equipment to make such programming available. All PEG access programming is therefore considered to be non-vertically integrated with MSOs.

178. Of note is a recent proposal to create a non-traditionally owned and operated PEG access service via a merger between a PEG access corporation and a Public Broadcasting System ("PBS").[719] 'Olelo (a public-access corporation) and the Hawaii Public Broadcasting Authority (a PBS affiliate) are seeking such

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[710]*Id.*

[711]*Id.*

[712]App. D, Tbl. D-3.

[713]John Dempsy and Gary Levin, *News Derby Upset by Dark Hors*e, Variety, Sept. 22-28, 1997, at 71.

[714]Marianne Paskowski, *Dolan's 'Hyperlocalism*', Multichannel News, Oct. 5, 1998, at 52.

[715]*Id.*

[716]Communications Act, § 611, 47 U.S.C. § 531.

[717]*Alliance Calls on FCC to Implement Access on DBS,* Press Release, Sept. 28, 1998.

[718]Alliance for Community Media 1997 Comments at 4.

[719]Linda Haugsted, *PBS Teams up with Hawaiian Access Group,* Multichannel News, Oct. 5, 1998, at 17.

a merger with the belief that it will also serve to secure funding for both entities through cable franchise fees.[720] The merger is supported by Hawaii Governor Ben Cayetano and PBS CEO Ervin Duggan, who sees it as a "possible model for other communities across the nation."[721] Others in the cable-production community view the merger as an infringement on PEG access channel capacity and contend that PEG programming and PBS programming have conflicting missions.[722]

179. Section 335 of the 1992 Cable Act directed the Commission to initiate a rulemaking to impose public interest or other requirements for providing video programming on DBS service providers.[723] Section 335(b) mandates that DBS providers reserve between 4% and 7% of their channel capacity exclusively for noncommercial programming of an educational or informational nature.

180. In March 1993, the Commission initiated a proceeding to implement Section 335.[724] In September 1993, after the Commission had received comments in this proceeding, the U.S. District Court for the District of Columbia held that Section 335 was unconstitutional.[725] This ruling effectively froze the proceeding. On August 30, 1996, the U.S. Court of Appeals for the District of Columbia Circuit reversed the District Court and held that Section 335 was constitutional.[726] In January 1997, the Commission issued a Public Notice seeking to update and refresh the record in its proceeding implementing Section 335.[727] As discussed above, the Commission subsequently adopted a *Report and Order* ("*DBS Report and Order*") in November 1998 which requires DBS service operators to set-aside 4% of their channel capacities exclusively for noncommercial programming of an educational or informational nature.[728] The DBS Report and Order also requires that DBS operators comply with the political broadcasting rules of Section 312(a)(7) of the

[720]*Id.*

[721]*Id.*

[722]*Id.*

[723]Section 335 of the Communications Act. Section 335 was added to the Communications Act by Section 25 of the 1992 Cable Act. 47 U.S.C. § 335.

[724]*Implementation of Section 25 of the Cable Television Consumer Protection and Competition Act of 1992, Direct Broadcast Satellite Service Obligations*, MM Docket No. 93-25, Notice of Proposed Rulemaking ("*Public Service Obligations NPRM*"), 8 FCC Rcd 1589 (1993).

[725]*Daniels Cablevision, Inc. v. United States*, 835 F. Supp. 1 (D.D.C. 1993).

[726]*Time Warner Entertainment Co., L.P. v. FCC*, 93 F.3d 957 (D.C. Cir. 1996).

[727]*Implementation of Section 25 of the Cable Television Consumer Protection and Competition Act of 1992, Direct Broadcast Satellite Service Obligations Comments Sought in DBS Public Interest Rulemaking*, MM Docket No. 93-25, Public Notice, 12 FCC Rcd 2251 (1997).

[728]*Commission Implements Public Interest Obligations for Direct Broadcast Satellite Service (MM Docket No. 93-25)*, Report No. IN 98-59, Nov. 19, 1998.

Communications Act, granting candidates for federal office reasonable access to broadcasting stations, and Section 315 of the Act, granting equal opportunities to candidates at the lowest unit charge.[729]

181. Electronic programming guides. In the *Notice* in this proceeding, we requested information on electronic programming guides ("EPGs") offered by cable operators and other MVPDs. Ameritech states that EPGs will become increasingly critical to consumers as the number of channels increases and as more interactive information is provided along with programs, such as sports statistics to accompany sports programming.[730]

182. Gemstar is the developer and distributor of electronic programming guide technology. Gemstar is not affiliated with any MVPD and, earlier this year, resisted a $2.8 billion takeover offer from UVSG.[731] Gemstar's method of transmission of its EPG services varies, including distribution by telephone lines to an MVPD's headend for subsequent distribution to subscribers or by use of the VBI in program signals. Gemstar's revenues are generated from a continuing license fee from consumer electronic manufacturers and other licensees, although Gemstar states that it is currently considering including advertising in its EPG.[732]

183. According to Gemstar, several MVPDs offer or plan to offer EPGs that do or will compete with Gemstar. These include: SuperGuide offered by SuperGuide Corporation available to C-band subscribers; PreVue Guide, offered by PreVue Networks Inc., a wholly owned subsidiary of United Video Satellite Company, which is controlled by TCI; Time Warner Cable's announced interactive guide as part of its Pegasus digital offering; and DBS companies DirecTV/USSB and EchoStar, who provide their own EPG offerings.[733]

184. Ameritech expresses concern that vertically-integrated programmers could steer viewers to their own programming through the design of their guides.[734] Ameritech asserts that because of TCI's EPG provider affiliation, TCI could potentially seek exorbitant licensing fees, engage in exclusionary licensing practices and favor affiliated advertisers and programmers.[735] Gemstar asserts that certain cable operators that offer or plan to offer their own programming guides have engaged in anticompetitive conduct by interrupting

[729] *Id.*

[730] Ameritech Comments at 44.

[731] Eben Shapiro, *NBC and Gemstar Sign Broad Pact on Program Guide*, Wall Street Journal, Jul. 16, 1998, at B7.

[732] Gemstar Comments at 6.

[733] *Id.* at 7-8. DirecTV's programming guide does not receive financial support from either advertising or subscriber fees. DirecTV Comments at 19.

[734] Ameritech Comments at 44.

[735] *Id.* at 45.

the transmission of competing guides.[736] Gemstar states that this behavior eliminates competitive alternatives and creates a barrier to market entry, contrary to the intent of the 1996 Act as a whole, and specifically to Section 628 of the Communications Act.[737] Section 628 of the Communications Act prohibits cable operators and satellite programming vendors from engaging in "unfair methods of competition or unfair or deceptive acts or practices" that hinder MVPDs efforts to provide programming to consumers.[738] Gemstar further notes that the Commission, when implementing Section 629 of the Communications Act in the *Navigation Devices Order*,[739] recognized concerns regarding limitations on consumer access to content, and stated that it intended to monitor developments in this area with respect to EPGs.[740] Gemstar states that it also will monitor the EPG industry for instances of anticompetitive interference.[741] NCTA, however, states that Section 628 is not applicable to EPG issues, and that there is no statutory basis in the Communications Act for the Commission to require cable operators to configure their systems in order to transmit competing EPGs.[742] NCTA further observes that, while the Commission took note of anticompetitive concerns in the *Navigation Devices Order*, the Commission found no reason to act on these concerns beyond monitoring developments in the EPG market.[743]

185. *Programming Costs.* In the Notice, we asked about the effect of increased programming costs on rates, especially for cable service. In the 12-month periods ending in July, 1996 and July, 1997, rates for regulated cable programming and equipment rose 8.8% and 8.5% respectively.[744] During those same periods, average monthly rates on a per channel basis rose 5%,[745] while inflation rose approximately 2%. ABC asserts that programming costs have risen because of the increase in demand for scarce resources, such as film or

[736]Gemstar Comments at 4.

[737]*Id.* at 10.

[738]Communications Act, § 628, 47 U.S.C. § 548.

[739]*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).

[740]Gemstar Comments at 10-11. The Commission 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 at this time the extent of any obligation of multichannel video programming systems to make such services available pursuant to Section 629 or otherwise." *Navigation Devices Order*, 13 FCC Rcd at 14820-1 ¶ 116.

[741]Gemstar Comments at 11.

[742]NCTA Reply Comments at 16.

[743]*Id*. at 15-16.

[744]*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 ("*Report on Cable Industry Prices*"), 12 FCC Rcd at 22756 ¶ 28.

[745]*Id.*

sports stars, and because a variety of media are competing against each other for these resources.[746] A&E notes that changes in programming costs are not the sole component of cable rate increases to consumers and that the Commission's *Report on Cable Industry Prices* found that equipment costs, system upgrades, channel additions, programming fees and inflation all contributed to increases in cable rates.[747] NCTA notes that programming expenditures by basic cable networks increased from $3.0 billion in 1995 to $4.0 billion in 1997.[748] During that time, cable networks spent more on originally produced movies and programming, on additional and renewed sports rights, and on syndicated programming.[749]

186. *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 discrete programming choices (i.e., service on an "a la carte" or individual channel basis) rather than programming service packages (i.e., tiers of programming services). We asked what would be required to allow operators to offer more customization in their programming packages than is currently available; what are the technical requirements that permit an MVPD to offer customized service; and what are the economic, legal or other impediments to offering programming services in this manner.

187. Tiering of programming services dates to the time when cable operators began to offer satellite-delivered programming.[750] As systems have upgraded their channel capacity and more programming services have become available, the enhanced basic tiers have become larger and some operators have added mini-tiers.[751] According to NCTA, tiering generally has been the best way to provide the programming that subscribers want at the lowest cost even if all of the services on the tier are not wanted.[752] Commenters generally identify three main issues concerning a la carte delivery of programming services: 1) a la carte delivery entails increased operating and equipment costs which would result in higher subscriber rates; 2) a la carte delivery is not technically feasible without the use of addressable set-top converter boxes, which most cable subscribers do not have; and 3) a la carte delivery is not economically feasible for new programming services because new services benefit from their association with bundled tiers where they can be sampled by casual viewers.

188. ABC asserts that potentially distinct products, such as an assortment of programming services, are bundled in order to lower transaction costs, exploit scale and scope economies, or to enhance the

[746]ABC Comments at 16.

[747]A&E Comments at 7. *See also Report on Cable Industry Prices*, 12 FCC Rcd 22756.

[748]NCTA Comments at 43.

[749]*Id.*

[750]*Id.* at 46-47.

[751]*Id.* at 47.

[752]*Id.*

attractiveness or convenience of the product to consumers.[753] Bundling of programming services reduces operating costs and is beneficial to subscribers and cable operators in terms of larger industry output and lower average price per channel.[754] NCTA emphasizes that programming services rely on a duel revenue stream comprised of advertising and license fees, where 60% of revenues are attributable to ad sales. NCTA then provides the following example of how subscriber rates would increase if a programming service offered on a tier today instead were to be delivered a la carte: If a basic network that today charges an operator $.30 per subscriber per month instead were to be carried a la carte, and only 20% of cable households were to subscribe to the network on an a la carte basis, then the network -- in order to maintain the same monthly revenue amount -- would have to charge the operator $3.30 per subscriber per month to replace advertising and license fee revenues resulting from the loss of 80% of its subscriber base.[755] The higher costs charges to operators would ultimately be passed on to subscribers of the service delivered a la carte.[756]

189. ABC states that the primary reason for bundling services is to enable subscribers to forgo additional equipment and transaction costs for the purchase or rental of addressable set-top converter boxes;[757] and NCTA states that an important technical limitation to offering programming on an a la carte basis is the inability to offer services on a discrete channel-by-channel basis without the use of such converter boxes.[758] These commenters state that fewer than half of today's cable subscribers have set-top converter boxes; therefore any requirement that programming be offered on an a la carte basis would make it impossible for most cable consumers to receive cable programming without incurring the inconvenience and extra cost of having an addressable set-top converter box for each television that they use to watch cable programming.[759]

190. An important feature of bundling programming on a tier of service, according to ABC, is that it enables the launch of new and previously unsampled programming services that contribute to the diversity of programming available to the public.[760] Moreover, ABC states that new programming services benefit greatly from their association on bundled tiers with well established networks; and it is through that association that new services have the greatest opportunity to be sampled and hence to find an audience.[761] A&E states that the use of tiers enables operators to package new or niche programming with established programming -- thus broadening a new service's potential audience -- while enabling established networks to maintain the

[753]ABC Comments at 1.

[754]*Id.* at 5.

[755]NCTA Comments at 52.

[756]*Id.*

[757]ABC Comments at 2-3.

[758]*Id.*

[759]ABC Comments at 3; NCTA Comments at 48.

[760]ABC Comments at 4.

[761]*Id.*

subscribership necessary to attract advertisers.[762] A&E further asserts that interference with the ability to bundle programming would make developing new or novel programming more risky, as programmers or operators would have to be willing to absorb the upfront costs of starting -- or paying the license fees for -- new programming without being assured some initial audience.[763] We note, however, that the technical concerns raised to the provision of a la carte services may not apply to the creation of a limited number of "mini-tiers" and should be obviated altogether to the extent that cable operators have transitioned to digital. Comcast provides three or more levels of programming service, including a low priced basic service tier, a CPS tier, and an NPT tier. Comcast asserts that it is beneficial to market their services in this way.[764]

191. *Regulatory Issues Related to Program Access, Carriage Rules.*[765] The Commission established rules pursuant to the 1992 Cable Act concerning programming arrangements between MVPDs and satellite-delivered programming vendors (the "program access" rules).[766] These rules prohibit unfair competition and discriminatory practices by cable operators and vertically-integrated, satellite-delivered programmers that may deter competition from other MVPDs.[767] The program access rules also prohibit exclusive distribution contracts for satellite cable or broadcast programming between vertically integrated cable operators and programmers, unless the parties can demonstrate to the Commission that the contract is in the public interest.[768] The Commission's program access and carriage rules are intended to promote the public interest, convenience, and necessity by increasing competition and diversity in the multichannel video programming market, to increase the availability of satellite cable programming and satellite broadcast programming to persons in rural and other areas not currently able to receive such programming, and to spur the development of communications technologies.[769]

192. On August 10, 1998, the Commission released a *Report and Order* ("*Program Access Order*") which amended certain of the program access regulations.[770] In the *Program Access Order*, the

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[762]A&E Comments at 10.

[763]*Id*. at 10-11.

[764]*See* Comcast, *ex parte* submission, Oct. 5, 1998.

[765]*See* Appendix E for a description of program access matters resolved since the *1997 Report*. All but one program access complaint dealt with exclusivity concerns rather than price discrimination issues.

[766]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.

[767]47 C.F.R. § 76.1002(b).

[768]47 C.F.R. § 76.1002(c)(2).

[769]*See* Section 19 of the 1992 Cable Act, Development of Competition and Diversity in Video Programming Distribution. *See also* 47 U.S.C. § 548.

[770]*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 (continued...)

Commission found that its existing statutory forfeiture authority can be used in appropriate circumstances as an enforcement mechanism for program access violations.[771] The Commission affirmed its statutory authority to impose damages for program access violations and found that the imposition of damages could be appropriate in the implementation of program access rules.[772] The Commission also imposed time limits for the expeditious resolution of program access cases, finding that denial of programming cases (unreasonable refusal to sell, petitions for exclusivity, and exclusivity complaints) generally should be resolved within five months of the submission of the complaint to the Commission and that all other program access complaints should generally be resolved within nine months of the submission of the complaint to the Commission.[773]

193. The Commission also addressed the issue of terrestrial delivery of formerly satellite-delivered programming and its impact on the program access rules. Numerous commenters in the *Program Access Order* asserted that the Commission has the statutory authority under Section 628 of the Communications Act to enforce remedial measures upon a vertically-integrated programmer that moves from satellite-delivered programming to terrestrial-delivered programming for the purpose of evading the program access requirements.[774] In the *Program Access Order*, the Commission noted that it has received only two complaints against the same vertically-integrated programmer related to moving the transmission of programming from satellite to terrestrial delivery for the alleged purpose of evading the program access rules.[775]

194. While the Commission indicated that the record did not then show a significant anti-competitive impact necessitating Commission action, we recognized that reasonable concerns were raised regarding the scope of the statutory language. The Commission stated that the issue of terrestrial distribution of programming could eventually have a substantial impact on the ability of alternative MVPDs to compete in the video marketplace, and indicated that it would continue to monitor this issue and its impact on competition in the video marketplace.[776] In addition, the Commission noted that Congress is considering legislation which, if enacted, would introduce important changes to the program access provisions, including

[770](...continued)
Order, ("*Program Access Order*"), 13 FCC Rcd 15822 (1998).

[771]*Id.* at 15825-6 ¶ 5.

[772]*Id.*

[773]*Id.*

[774]*Id.* at 15852-3 ¶ 64.

[775]The Bureau subsequently determined in one of the program access complaints that the defendant's conduct was not evasive and did not violate the program access rules. *See Memorandum Opinion and Order In the Matter of DirecTV, Inc. Complainant, v. Comcast Corporation, Comcast-Spectacor, L.P., Comcast SportNet, Defendants*, DA 98-2151 (rel. Oct. 27, 1998).

[776]*Program Access Order*, 13 FCC Rcd at 15856 ¶ 71.

clarification of the Commission's jurisdiction over terrestrially-delivered as well as non-vertically integrated programming.[777]

[777] *Id.*; Video Competition and Consumer Choice Act of 1998, H.R. 4352 (July 29, 1998).

C. Technical Advances

195. In this section, we update the information provided in the *1997 Report* regarding technological developments[778] and discuss recent activities to promote the commercial availability of the equipment used to access video programming and other services pursuant to the requirements of the 1996 Act.[779] Cable operators and other MVPDs continue to develop and deploy advanced technologies, especially digital compression techniques, 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." 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. Today, the most common navigation devices in use are the boxes that sit on top of television sets to access cable television and which typically include a descrambler and tuner.

1. Deployment of Digital Technology

196. In the *1997 Report*, we discussed the advantages and disadvantages of cable systems that rely solely on digital compression to add video channels to their systems.[780] We further stated that TCI has employed an advanced digital compression technique called statistical multiplexing for its Headend in the Sky ("HITS") prepackaged programming service. This technique allows cable operators to receive prepackaged digital video channels by satellite which then are passed through the headend to subscribers. The success of HITS during the past year has resulted in the widespread deployment of this technology by many other MSOs and small system operators.[781] This trend is expected to continue, and cable operators could begin migrating programming from the analog tier to the digital tier. As analog channels are removed, the vacated bandwidth can be used to provide additional digital video programming and other advanced digital services.

197. In the wake of the success of HITS, Time Warner has announced plans to launch its "AthenaTV" compressed digital programming feed. Time Warner states that AthenaTV will give it the ability to offer more than 150 additional cable channels and can be tailored to advanced systems which already have upgraded their plants to 750 MHz. Time Warner's primary goal is to provide programming not already carried by most cable systems. In contrast, HITS provides many program offerings which may already be included in an upgraded cable system's analog tier.[782]

198. While the cable industry is generally relying on digital video compression to provide additional video channel choices to better compete with other MVPDs, especially DBS, it is also redoubling its efforts

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[778] *1997 Report*, 13 FCC Rcd at 1127-30 ¶¶ 171-177.

[779] *Id.* at 1162-63 ¶¶ 256-7.

[780] The advantages include cost savings and an increased speed of deployment because existing cable plant need not be upgraded or rebuilt. On the other hand, without the benefit of a major modification or restructuring to existing plant, telephony and other two way services may be difficult to implement. *See 1997 Report*, 13 FCC Rcd at 1127-28 ¶ 172.

[781] As of November 1998, there were 1,000,000 digital customers with service provided by HITS. E-mail from Katina Vlahadamis, Media Relations Manager, TCI, Nov. 23, 1998.

[782] *See* Time Warner Launches AthenaTV, Potential Competitor for TCI's HITS, Comm. Daily, Oct. 14, 1998.

to take advantage of its large bandwidth capacities from its coaxial and optical fiber cable. As such, it is concentrating in other digital and data areas including cable modem and Internet services, IP telephony, other data deliveries and general cable telephony.

2. Navigation Devices

199. 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.[783] Since the *1997 Report*, the Commission adopted rules to implement Section 629[784] and industry groups have undertaken efforts to develop standards consistent with the rules and the goals of Section 629. In particular, the rules will benefit consumers and further the Commission's goal of providing competition in the telecommunications marketplace by creating a market for consumers to own equipment to access video programming and other services. In addition, competition in the manufacture and distribution of consumer devices should lead to innovation, more choices in services and products and lower prices that are expected to increase competition for equipment used to access MVPD services.

200. Specifically, Section 629 of the Communications Act requires the Commission, in consultation with appropriate industry standard-setting organizations, to adopt rules to assure the commercial availability of navigation devices from manufacturers, retailers and other vendors not affiliated with any MVPDs.[785] Section 629 provides that any rules the Commission adopts may not jeopardize the security of video services offered or impede a video programming provider's legal rights to prevent theft of service.[786] Multichannel video programming providers may continue to offer equipment as long as they do not subsidize the equipment prices with the charges for their services.[787] The rules will lapse when the Commission determines that the markets are competitive and that elimination of such rules would serve the public interest.[788]

201. On June 11, 1998, the Commission adopted rules and policies to implement Section 629.[789] In the *Navigation Devices Order*, the Commission determined that Section 629 covers cable television, multichannel broadcast television, DBS, MMDS, and SMATV systems, but not open video systems. We concluded that, while the focus of Section 629 is on cable television set-top box descramblers and cable modems that have historically been available only on a lease basis from the service provider, the statute covers equipment used to access services offered over multichannel video programming systems, such as televisions, VCRs, cable set-top boxes, personal computers, program guide equipment, and cable modems. The

[783] 47 U.S.C. § 549. Section 629 was added to the Communications Act by Section 304 of the 1996 Act.

[784] *Navigation Devices Order*, fn. 739 *supra*.

[785] 47 U.S.C. § 549.

[786] 47 U.S.C. § 549(b).

[787] 47 U.S.C. § 549(a).

[788] 47 U.S.C. § 549(e).

[789] *Navigation Devices Order* fn. 739 *supra.*

Navigation Devices Order notes that subscribers have the right to attach any compatible navigation device to a multichannel video programming system and that commercial availability is furthered only if consumers are aware of the availability of equipment from alternative sources. The rules prohibit service providers from taking actions that would prevent navigation devices that do not perform conditional access functions from being made available from retailers, manufacturers, or other unaffiliated vendors. The rules also provide that cable operators and other MVPDs can take the necessary steps to guarantee the security of their systems and their programming in accordance with the provisions in the Communications Act that prohibit the manufacture, sale and distribution of equipment designed to allow for the unauthorized reception of service.

202. Under the rules, MVPDs must separate out security functions from non-security functions by July 1, 2000. An exception is made for navigation devices that operate throughout the continental United States and are commercially available from unaffiliated sources, which includes DBS. The rules rely heavily on the representations of the various interests involved that they will agree on relevant specifications, interfaces, and standards in a timely fashion, thus permitting the manufacture and sale of navigation devices. In the interim, MVPDs may continue to offer devices that have security and non-security functions integrated. We intend to require that integrated boxes no longer be available after 2005, at the latest, although we will assess the state of the market beginning in 2000 to determine whether it is reasonable for such requirement to be implemented at an earlier time. The Commission also found that existing equipment rate rules applicable to cable systems not facing effective competition fulfill the statute's requirement to prohibit subsidies. Finally, the Commission adopted rules implementing the statute's waiver and sunset provisions.

203. As discussed in the *1997 Report* and in our *Navigational Devices Order*, Cable Television Laboratories, Inc. ("CableLabs") and its members are developing "Open Cable™" specifications needed for interoperable digital set-top boxes intended to convert digital signals for reception by current analog television sets.[790] CableLab's objective is to incorporate interoperability standards in equipment that will enable a new range of interactive services to be available to cable customers. The Open Cable™ project specifically is aimed at identifying, qualifying and supporting Internet based voice and video products over cable systems.[791] As part of the *Navigational Devices Order*, the Commission is requiring the filing of reports at six month intervals to ensure that the CableLabs OpenCable™ process, a private effort by several cable companies, is progressing towards the requirement of separation of security by July 1, 2000.

204. The cable industry also has begun widespread deployment of cable modems.[792] This deployment is aided by the finalization of the Data Over Cable Service Interface Specification ("DOCSIS") by CableLabs.[793] The goal of the DOCSIS project is to provide manufacturers with a set of standards that will enable the production of interoperable cable modems. Modem manufacturers are currently seeking DOCSIS compliance certification and interoperable cable modems may be available at retail this year. This will allow

[790] *1997 Report*, 13 FCC Rcd at 1128-29 ¶ 174; *Navigation Devices Order*, 13 FCC Rcd at 14780-81 ¶ 14.

[791] http://www.cablelabs. com. *See also Cable Industry Creates `OpenCable™'; Goal Is Interoperable Set-Top Boxes*, SpecsNews From CableLabs, August/September 1997, at 1.

[792] *See* para. 57 *supra*.

[793] *See Seven Cable Modem Manufacturers Seek DOCSIS Certification*, SpecsNews from Cablelabs, Sept. 1998, at 3.

cable modems to compete at retail with traditional twisted pair modems once cable modem service is available in a community. Further, major computer manufacturers recently announced that they will begin to incorporate DOCSIS compliant modems into their product lines when these modems become available.[794]

205. Moreover, the cable industry is exploring using solely cable plant for the provision of all digital services, including voice, video, data and other enhanced services, such as faxing and video-conferencing. The PacketCable project recently announced by CableLabs serves as an extension of the Open Cable and DOCSIS standards. The goal of PacketCable is to create an IP-based set of standards that will facilitate the manufacturing of interoperable equipment for the provision of these enhanced services. As these projects advance, the cable industry may become a strong competitor to voice and data service providers across the telecommunications sector industries.[795]

206. The actual commercial availability of navigation devices is at the earliest stages. For example, TCI recently announced that it would require customers using standardized cable modems to buy them at retail when it launches its high-speed data services in Spokane, Washington. Previously, consumers have had the option of leasing or purchasing at retail. TCI plans to rely on retailers to be able to sell modems that the industry certifies as compliant with the DOCSIS standards, although no modems have been certified as DOCSIS compliant yet. Spokane is expected to serve as a test for consumer acceptance of the need to buy modems at retail. Specifically, TCI is interested in evaluating the effect that requiring consumers to purchase modems costing $319.99 will have on penetration levels.[796]

IV. COMPETITIVE RESPONSES

207. During 1998, a number of new distributors entered specific existing cable markets. In these communities, incumbent cable operators have responded to entry in a variety of ways, such as lowering prices, adding channels at the same monthly rate, improving customer service, or adding new services such as interactive programming services. In subsection A below, we analyze the initial responses of both incumbents and new entrants in a sample of local franchise areas where the incumbent cable operator has petitioned the Commission for a determination of "effective competition."[797] If the Commission finds that a cable system is

[794]"Compaq, for example, said it will produce PCs with built-in cable modems." See Computer Companies Buy Stake In Road Runner Cable Modem Service, Comm. Daily, Jun. 16, 1998. *See also* @Home, Dell to Link Up on Cable-Ready' PCs, Cable World, Oct. 12, 1998, at 4.

[795]*See PacketCable Hosts Successful Wave of Interoperability Tests*, SpecNews from CableLabs, Sept. 1998, at 4.

[796]Fred Dawson, *TCI's Spokane Strategy, Modem Rollout Leaves No Lease Option*, Multichannel News, Nov. 2, 1998, at 1; Price Colman, *Cable Modems Flunk DOCSIS Test*, Broadcasting & Cable, Nov. 30, 1998, at 112.

[797]Under the 1992 Cable Act, effective competition exists in three situations: (1) where the franchise area is served by at least two unaffiliated multichannel video programming distributors, each of which "offers comparable video programming" to at least 50% of households, and at least 15% of households subscribing to programming services offered by an MVPD subscribe to services other than those offered by the largest MVPD; (2) where fewer than 30% of the households in the franchise area subscribe to the cable service of a cable system; or (3) where a municipal cable system offers service to at least 50% of the households in the franchise area. § 623(1)(A)(B)(C), (continued...)

subject to effective competition, its rates for programming service tiers and equipment are not subject to regulation by either the Commission or local franchising authorities. The samples analyzed below includes localities in which an incumbent cable operator has been determined to face effective competition from one new entrant, as well as markets in which a petition for effective competition has been filed and is pending a decision before the Commission. These case studies do not suggest what would happen if there were additional competitors.

A. New Case Studies

1. Barron, Wisconsin

208. In April 1997, CTC TelCom ("CTC"), a subsidiary of Chibardun Telephone Cooperative, Inc. ("CTCI"), was formed to provide cable television and local telephone service to Barron, Wisconsin.[798] CTCI is an incumbent LEC in Wisconsin, and CTC is both an affiliate of CTCI and a competitive LEC.[799]

209. CTC entered the market in October of 1997,[800] leasing copper cable facilities from GTE until it completed construction of its advanced fiber optic cable network.[801] CTC has activated approximately 75% of its new cable facility which will offer service to the entire City of Barron.[802] CTC's new network delivers cable television, telephone, high-speed data, and wireless personal communications services.[803]

210. CTC offers a 14 channel basic service package for $12.95 per month and a 48 channel basic plus expanded service package for $19.95.[804] The CTC expanded basic service includes most of the 40 channel package offered by Marcus Cable, the incumbent cable operator, at $27.37 per month. In response to CTC's entry into the market, Marcus has added 19 channels to its expanded basic service with no rate increase, added additional premium services such as adding more HBO channels to the HBO package with no increase in price,

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[797](...continued)
47 U.S.C. § 543(1)(1)(A)(B)(C). The 1996 Act added a fourth test for effective competition: when a local exchange carrier or its affiliate (or any MVPD using the facilities of such carrier or affiliate) offers video programming services (other than direct-to-home satellite services) in the franchise area of an unaffiliated cable operator, but only if the services so offered are comparable to the services provided by the cable operator. Communications Act § 623(1)(1)(D), 47 U.S.C. § 543 (1)(1)(D).

[798]*Petition of Marcus Cable Associates, L.P., for Determination of Effective Competition*, Petition for Special Relief ("Barron Petition"), CSR 5198-E, Jan. 4, 1998, at 2 and 5.

[799]*Before the Public Service Commission of Wisconsin, Application of CTC Communications, Inc., for Certification as a Competitive Local Exchange Carrier and Alternative Telecommunications Utility*, Findings of Fact, Conclusions of Law, Interim Order, and Certificate, 1455-NC-100, Feb. 20, 1997.

[800]*Communique* (CTC TelCom's monthly subscriber newsletter), January 1998 edition.

[801]*Chibarsun to Offer Telephone Service in Barron, Rice Lake*, Baron News Service, Apr. 9, 1997.

[802]Barron Petition at 1 and 7.

[803]*Chibarsun to Offer Telephone Service in Barron, Rice Lake*, Barron News Service, Apr. 9, 1997.

[804]*See* Barron Petition at 9 and Exhibit H.

upgraded its system by adding PPV channels and an on screen programming guide, and increased its marketing efforts such as offering free remote controls.[805]

211. Prior to CTC's entry into the market, Marcus Cable had 1,009 subscribers in the City of Barron.[806] Within the first three months of CTC's entry, Marcus lost 32% of its subscriber base.[807] As of January 1998, CTC passed more than 50% of the households in Barron and served more than 15% of the households in Barron.[808] Consequently, in January 1998, Marcus filed a petition for determination of effective competition claiming that it met the requirements of the LEC test for showing effective competition.[809] Marcus asserted that CTC is affiliated with a LEC, serves customers in Barron, offers comparable service, and has elicited a competitive response from Marcus.[810] The Cable Services Bureau used the fact that CTC satisfied the two prongs of the competing provider test as unqualified evidence that CTC's service was "offered" to the franchise area as required by the LEC test.[811] The Bureau granted the petition, which was unopposed, in May 1998.[812]

2. Los Angeles and Orange Counties, California

[805]*Id.* at 10.

[806]*Id.* at 3.

[807]*Id.* at 8.

[808]*Id.* Exhibit E: Letter from Rick Vergin, Executive Vice President of CTC, to Steven Caple, Marcus Cable, Jan. 7, 1998.

[809]Section 301(b)(3) of the 1996 Act added another prong to the effective competition test, finding that effective competition exists when video programming is offered by, or over the facilities of, a LEC or its affiliate. Thus, effective competition now exists if a:

> local exchange carrier or its affiliate (or any multichannel video programming distributor using the facilities of such carrier or its affiliate) offers video programming services directly to subscribers by any means (other than direct-to-home satellite services) in the franchise area of an unaffiliated cable operator which is providing cable service in that franchise area, but only if the video programming services so offered in that area are comparable to the video programming services provided by the unaffiliated cable operator in that area.

[810]Barron Petition at 4-10.

[811]Barron Order at 4. Under the competing provider test, a cable system is subject to effective competition if the franchise area is (a) served by at least two unaffiliated MVPDs each of which offers comparable programming to at least 50% of the households in the franchise area, and (b) the number of households subscribing to the MVPD other than the largest MVPD exceeds 15% of the households in the franchise area. *See* 47 U.S.C. §543(l)(1)(B); 47 C.F.R. §76.905(b)(2).

[812]*Marcus Cable Associates, L.P. Petition for Special Relief*, CSR 5198-E, Memorandum Opinion and Order, DA 98-834 (1998) at 5.

212. In May 1997, Pacific Bell Video Services ("PBVS"), a wireless cable operator, began a market trial to offer commercial video programming services on a limited basis in Los Angeles and Orange Counties, California.[813] During the market trial, PBVS had about 3,500 test customers or "friendlies," who receive the service free of charge.[814] As discussed in the LEC Section of this report,[815] SBC Communications, the new owner of PBVS and of PBVS's parent company (Pacific Telesis Group, "PacTel"), has taken a more limited approach to marketing video programming than initially announced by PacTel. Although PacTel has spent several hundred million dollars to develop its services, PBVS is expected to market its services on a commercial basis only to several thousand households in the Los Angeles market, a market with 3.5 million potential customers.[816] PBVS states that a gradual rollout of its services is necessary to maintain service quality and to test market its acceptance.[817] Some MVPDs are beginning to question whether PBVS will become a significant provider in the market.[818]

213. PBVS's commercial offering includes more than 150 channels of CD-quality sound and high quality video. Its $31.95 per month basic service package, Digital Select, includes 49 local and satellite channels, 31 music channels, an on-screen interactive program guide, and a digital set-top box with remote. Unlike DBS providers, PBVS can offer the local networks ABC, NBC, and CBS and local independent and other stations.[819] One premium channel package, such as HBO and HBO2 or Cinemax and Cinemax2, costs an additional $8 per month.[820] In addition to the monthly service fee, there is a one-time installation charge of $100.[821]

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[813]*Petition of Paragon Communications, d/b/a Time Warner Communications KBL Cable Systems of the Southwest, for Determination of Effective Competition*, CSR-5137-E, Petition for Relief ("LA and Orange Counties Petition") (Oct. 21, 1997) at 6-7.

[814]Jonathan Marshall, *L.A. Gets 'Wireless Cable' TV; Pac Bell's Bay Area Service Still on Hold*, The San Francisco Chronicle, May 30, 1997, at C1.

[815]*See* para. 115 *supra*.

[816]Leslie Cauley, *PacTel Launches Wireless Cable-TV on Scaled-Back Basis in California*, Wall Street Journal, Jun. 30, 1997, at 11.

[817]Kent Gibbons, *SBS Tiptoes into LA Cable Market*, Multichannel News, Jun. 2, 1997, at 2.

[818]*Id*.; Leslie Cauley, *PacTel Launches Wireless Cable-TV on Scaled Back Basis in California*, Wall Street Journal, Jun. 30, 1997, at 11.

[819]Allison Skraft, *Pacific Bell Among the New Options to Cable Service*, Daily Breeze, (Oct. 10, 1987), at D2.

[820]Leslie Cauley, *PacTel Launches Wireless Cable-TV on Scaled-Back Basis in California*, Wall Street Journal, Jun. 30, 1997, at 11.

[821]Allison Skraft, *Pacific Bell Among the New Options to Cable Service*, Daily Breeze, Oct. 10, 1997, at D2; Jonathan Marshall, *L.A. Gets 'Wireless Cable' TV; Pac Bell's Bay Area Service Still on Hold*, The San Francisco Chronicle, May 30, 1997, at C1.

214. Time Warner, an incumbent cable operator, currently offers a 52 channel expanded basic service for $27.95 per month, but has announced a price increase to $29.95.[822] Time Warner has recently upgraded its Orange County System and partially upgraded its Los Angeles System to add more channels, established a seven day per week, 24 hours per day in-house customer service office, and provides new installations six days per week.[823] Nevertheless, Time Warner asserts that it is losing subscribers to PBVS.[824] As of October 1997, some industry observers estimated PBVS subscribership in Southern California at 8,000 to 10,000 customers.[825]

215. Time Warner filed a petition with the Cable Services Bureau for the 19 franchise areas in the Counties of Los Angeles and Orange for determination of effective competition.[826] Time Warner's petition was opposed by the Cities of Cypress, Gardena, Garden Grove, Hawthorne, Lawndale, Los Alamitos, Torrance, and the Public Cable Television Authority on behalf of the Cities of Fountain Valley, Huntington Beach, Stanton,and Westminster (the "Cities").[827] The Cities claimed that PBVS did not "offer" service to the Cities, and that the viability of PBVS is questionable.[828] The Cities claimed that PBVS was not offered throughout each of the cable franchises in the Cities and that a substantial number of residents in each of the cable franchises in the Cities were not aware of PBVS's service offerings. In addition, the Cities argue that, from a technical or operational perspective, PBVS did not provide evidence demonstrating that each of the communities in the Cities can be offered service, given the diverse topography and geography of the Cities.[829]

216. Time Warner submitted samples of PBVS direct mailing materials in support of its petition. It also claimed that 80% of the 4,000 PBVS test market customers in Southern California who initially received service at no charge became paying subscribers by October 1997.[830] Time Warner subsequently submitted evidence showing that almost 1,200 of its customers residing in the Cities had cancelled their Time Warner service and switched to PBVS.[831]

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[822]LA and Orange Counties Petition, Exhibit M.

[823]*Id*. at 12.

[824]*Id.*

[825]Joe Schlosser, *PacBell's Low-Key Digital*, Broadcasting & Cable, Oct. 6, 1997, at 62; and Allison Skraft, *Pacific Bell Among the New Options to Cable Service*, Daily Breeze, Oct. 10, 1997, at D2.

[826]LA and Orange Counties Petition.

[827]*Petition of Paragon Communications, d/b/a Time Warner Communications KBL Cable Systems of the Southwest, for Determination of Effective Competition*, CSR 5137-E, Opposition to Petition for Special Relief ("Opposition to LA and Orange Counties Petition"), Nov. 14, 1997.

[828]Opposition to LA and Orange Counties Petition at 3-6.

[829]*Id*. at 3.

[830]Joe Schlosser, *PacBell's Low-Key Digital*, Broadcasting & Cable, Oct. 6, 1997, at 62.

[831]*Petition of Paragon Communications, d/b/a Time Warner Communications KBL Cable Systems of the* (continued...)

217. On May, 1, 1998, Time Warner's petition was denied.[832] The decision denying the petition found that Time Warner did not demonstrate that PBVS "offers" service as that term is used in effective competition determinations. Time Warner, it was concluded, had provided insufficient evidence that PBVS has engaged in marketing efforts relevant to the 19 cable franchise areas and that PBVS's marketing efforts were not sufficient to make potential subscribers reasonably aware of the availability of PBVS's service. It was expressly noted PBVS's statement that it was intentionally limiting its marketing to "very specific demographics."[833] Nor was there any evidence specifying the scope of PBVS's direct mail campaign. Although Time Warner may have lost 1,200 subscribers to PBVS, it remained unclear whether subscribers were lost in each of the 19 cable franchise areas involved. Further, the estimated subscriber loss represented only 0.3% of the 375,000 Time Warner subscribers in the Cities.[834]

218. On June 1, 1998, Time Warner submitted a petition for reconsideration which included additional evidence of the scope of PBVS's marketing efforts in each specific cable franchise area in the Cities.[835] The petition for reconsideration is currently being reviewed.[836]

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[831](...continued)
Southwest, for Determination of Effective Competition, CSR 5137-E, Reply to Opposition to Petition for Special Relief ("LA and Orange Counties Reply"), Dec. 15, 1997, at 19.

[832]*In re Petition of Paragon Communications, d/b/a Time Warner Communications KBL Cable Systems of the Southwest, for Determination of Effective Competition*, CSR 5137-E, Memorandum Opinion and Order ("LA and Orange Counties Order"), DA 98-826 (rel. May 1, 1998).

[833]LA and Orange Counties Order at 9-10, ¶ 21.

[834]LA and Orange Counties Order at 11 ¶ 23.

[835]*In re Petition of Paragon Communications, d/b/a Time Warner Communications KBL Cable Systems of the Southwest, for Determination of Effective Competition*, CSR 5137-E, Petition for Reconsideration ("LA and Orange Counties Recon Petition"), Jun. 1, 1998.

[836]On October 2, 1998, PrimeOne, an affiliate of Prime Cable, announced plans to acquire PBVS. *PrimeOne to Acquire Majority Stake in SBC's Wireless Video Operations* (press release), Oct. 2, 1998.

3. Thousand Oaks (and Camarillo), California

219. As we reported in the *1997 Report*, the City of Thousand Oaks, California[837] awarded a cable franchise to GTE Media Ventures ("GTE") in February 1996. GTE is wholly owned by the GTE Corporation, a LEC serving customers in 28 states. GTE Corporation is also the parent of GTE California, the incumbent LEC providing telephone services in California, including Thousand Oaks.[838] GTE faces two incumbent cable operators, Falcon Cablevision and TCI, that serve different parts of the city.[839] Falcon was the first incumbent operator to petition the Commission for a finding of effective competition in the Thousand Oaks franchise area. The Commission granted Falcon's petition April 1997.[840] TCI also filed a petition with the Commission, asking the Commission to find that TCI is subject to effective competition in Thousand Oaks. The petition was unopposed. In February 1998, the Commission granted TCI's petition for special relief.[841]

220. TCI, the second incumbent cable operator, has a subscriber base of 32,000 and is the larger of the two incumbents. It operates Ventura County Television, which serves the entire county of Ventura including the City of Thousand Oaks and Camarillo. TCI charges $10.51 for a 21 channel basic tier service and $26.30 for an expanded 54 channel service.[842]

221. GTE began offering its new cable service in September 1996 at $10.95 for 28 channels.[843] GTE also offers a larger expanded service (64 channels) than TCI at about the same price, $26.94.[844] TCI claimed that GTE was providing service to approximately 10, 250 subscribers in Thousand Oaks and

[837]The petition for relief and our analysis apply to both the City of Thousand Oaks and the City of Camarillo. Camarillo consists of two franchise areas, CUID Nos. CA0653 and CA075.

[838]*Petition of TCI of Ventura County, Inc. Petition for Determination of Effective Competition*, Petition for Special Relief, CSR 5103-E, ("Thousand Oaks Petition"), Sept. 17, 1997, at 5 and Exhibit B.

[839]*Falcon Cablevision to Cut Rates for Several Premium Channels*, Los Angeles Times, Nov. 22, 1996, at B1.

[840]*1997 Report*, 13 FCC Rcd at 1136 ¶ 196.

[841]*TCI of Ventura County, Inc. Petition for Special Relief*, CSR 5103-E, Memorandum Opinion and Order ("Thousand Oaks Order"), DA 98-199 (rel. Feb. 5, 1998).

[842]Miguel Helft, *Falcon Cablevision to Cut Rates for Several Premium Channels*, Los Angeles Times, Nov. 22, 1996, at B1; Miguel Bustillo, *Growth of Cable Competition, Benefits Spotty*, Los Angeles Times, Jul. 20, 1997 at B9.

[843]*1997 Report*, 13 FCC Rcd at 1135-6 ¶¶ 194-96;Thousand Oaks Petition at Exhibit A. GTE began to offer service in Camarillo in May 1997. *See* Thousand Oaks Petition at 8.

[844]Miguel Bustillo, *Growth of Cable Competition, Benefits Spotty*, Los Angeles Times, Jul. 20, 1997 at B9; Thousand Oaks Petition at Exhibit A.

approximately 4,000 subscribers in Camarillo.[845] Based on subscriber disconnect information, TCI asserts that many of these subscribers are former TCI customers.[846]

222. To counter GTE's entry, TCI did not apply a nationwide 7% rate increase to areas in Ventura County where it was competing with other MVPDs.[847] TCI asserts that it also offered discounts up to 15% to subscribers who agreed to take long-term subscriptions.[848] Since the competitors offer similar program packages at similar prices, both appear to be planning to compete on other terms. TCI has stated that it may begin offering new services such as "interactive television."[849] The new service would allow viewers to customize a program. For example, while watching Prime Sports, the viewer can request game statistics, watch interviews with players, or follow a star player throughout the game.[850] GTE is also testing a similar interactive service that appears to be more high-tech than TCI's service.[851] TCI's focus, however, remains on improving customers' programming choices and access.[852]

223. The Cable services Bureau found that TCI met its burden by satisfying the two prongs of the competing provider test for effective competition. First, the Bureau found that TCI passes 94% of the households in Thousand Oaks and GTE passes over 90%. In addition, the programming of the competing operators is comparable. Second, the Bureau found that GTE, the smaller of the two systems, has more than a 23% penetration rate in Thousand Oaks.[853]

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[845]Thousand Oaks Petition at 9-10. As of June 1997, one report suggests that GTE serves about 27,000 homes in Thousand Oaks, Camarillo, and the county's unincorporated areas. *See*, Leo Smith, *GTE Cable TV Enters Battle for Customers*, Los Angeles Times, Jun. 24, 1997, at 13B.

[846]Thousand Oaks Petition at 8 n. 26 and 9 n. 23.

[847]Miguel Bustillo, *Growth of Cable Competition, Benefits Spotty*, Los Angeles Times, Jul. 20, 1997, at B9.

[848]Thousand Oaks Petition at 12.

[849]Miguel Helft, *Battle For Cable High Ground Begins Underground; Telecommunications Giants Argue Over Cut Lines, Wage High-Tech War for TV Viewers*, Los Angeles Times, Aug. 20, 1996, at B1; Gloria Gonzales, *New fiber-Optic System View for Cable System; GTE Americast Continues to Work on $40 Million Project in Area*, Daily News of Los Angeles, Mar. 30, 1997, at TO1.

[850]Miguel Helft, *Battle For Cable High Ground Begins Underground; Telecommunications Giants Argue Over Cut Lines, Wage High-Tech War for TV Viewers*, Los Angeles Times, Aug. 20, 1996, at B1.

[851]*Id*.

[852]Gloria Gonzales, *New Fiber-Optic System Vies for Cable Business*, The Daily News of Los Angeles, Mar. 30, 1997, at TO1.

[853]Thousand Oaks Order at 3 ¶ 7.

4. Troy, Michigan

224. In April 1996, the City of Troy awarded a cable franchise to Ameritech.[854] Ameritech is a LEC serving customers in Illinois, Indiana, Ohio, Michigan, and Wisconsin, and is the parent holding company of Michigan Bell, the incumbent LEC serving Troy.[855]

225. In November 1996, Ameritech began providing service to about 70 percent of the city, serving approximately 2,500 subscribers.[856] TCI Cablevision of Oakland County ("TCI"), the incumbent cable operator in Troy, serves approximately 17,000 subscribers. Ameritech offered an 18 channel "Localcast" service and a 60 channel "Premiercast" service compared to TCI's 31 channel basic service and 85 channel "Cable Plus" service.[857]

226. Upon entering the market, Ameritech started an aggressive pricing policy which offered premiercast (which includes 12 premium channels) for about the same price that TCI was charging for its basic cable service plus HBO and Showtime.[858] In response to Ameritech's entry, TCI lowered its basic cable rate by over $4 from $10.58 to $6.51, added PASS Sports to its cable plus line-up, and moved the Disney channel from a premium service to its expanded basic tier.[859] A 1996 price comparison of monthly charges for cable and premium services, equipment, and a remote showed that TCI charged $53.90 per subscriber compared to $59.06 charged by Ameritech.[860] Ameritech asserts that TCI is continuing to use promotional offers to win back or retain subscribers.[861] For example, in March 1998, TCI began offering the first three months of digital service free of charge, which amounts to $30 of free services to current or new subscribers.

227. TCI petitioned the Cable Services Bureau for determination of effective competition in Troy, and the Bureau granted the petition on February 5, 1998. The Bureau found that Ameritech's extensive marketing efforts and press coverage of its construction ensure that potential subscribers are aware of the availability of Ameritech's service. Also, potential subscribers are able to receive Ameritech service for little

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[854]*Tribune-United Cable of Oakland County d/b/a TCI Cablevision of Oakland County*, CSR 5105-E, Memorandum Opinion and Order ("Troy Order"), DA 98-198 (rel. Feb. 5, 1998) at 2.

[855] *Tribune-United Cable of Oakland County, d/b/a TCI Cablevision of Oakland County, Inc, for Determination of Effective Competition*, CSR 5104-E, Petition for Special Relief ("Troy Petition"), Sept. 19, 1997, at 4.

[856]Troy Petition at 6

[857] Troy Petition at Appendix D: Ameritech Letter to Chief, Cable Services Bureau, May 1, 1998.

[858]*Ameritech Challenges TCI for Troy's Cable Subscribers*, Joel J. Smith, The Detroit News, Dec. 12, 1996, at B1.

[859] Troy Petition at 9.

[860] *Id*. at Exhibit F.

[861] Ameritech Letter at Appendix B.

or no additional investment and without encountering regulatory and technical difficulties. The Bureau also noted lower cable rates and added services as a result of competition in Troy.[862]

5. Vestavia Hills, Alabama

228. In October 1995, BellSouth Interactive Media Services ("BellSouth") was granted a cable franchise to serve the City of Vestavia Hills.[863] Rather than build its own facilities, BellSouth provides cable service over transmission facilities owned by its affiliate, BellSouth Telecommunications.[864] BellSouth Telecommunications is the incumbent LEC serving Vestavia Hills. In December 1996, BellSouth began to offer cable service in Vestavia. BellSouth targeted Vestavia as a new market because its size and terrain made building a system affordable and because its affluent residents are more likely to purchase video programming services.[865] TCI, the incumbent cable provider, states that BellSouth currently passes all 9,797 households in Vestavia and is providing service to 1,468 (or 15 percent) of those households.[866] DirecTV serves approximately 295 customers or 3 percent of the market.[867]

229. BellSouth's 15 channel basic service (Localcast) is offered at $9.95 per month.[868] Its expanded service (Premiercast) contains 30 additional channels for an additional charge of $14.54, and its expanded plus service includes 8 additional satellite channels (including The Golf Channel, Animal Planet, Home & Garden, Country Music TV, and Classic Sports Network) for $3 per month.[869] TCI provides a 15 channel basic service for $9.86 per month that is similar to BellSouth's basic service. With one exception, TCI's 43 channel expanded basic service at $17.66 is similar to BellSouth's expanded and expanded plus services at $17.54.[870] The exception is the Disney Channel which is included in BellSouth's expanded service, but is considered a premium service only available at an extra charge on TCI's system. BellSouth charges $8 per month for one premium service such as HBO or Showtime compared to $13.70 charged by TCI. Thus, adding the Disney Channel to TCI's expanded plus service would cost $31.36 compared to the comparable BellSouth service at

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[862] Troy Petition at 4.

[863] *Petition of TCI Cablevision of Alabama, Inc. for Determination of Effective Competition*, CSR 5124-E, Petition for Special Relief ("Vestavia Petition"), Oct. 1, 1997, Exhibit C (franchise agreement).

[864] Vestavia Petition, Exhibit C at 24.

[865] Jerry Underwood, *BellSouth Promises First-Class Cable TV*, The Birmingham News, Dec. 3, 1996.

[866] Vestavia Petition at 7.

[867] *Id*. at 12.

[868] BellSouth purchases two of Americast's programming packages, Localcast and Premiercast. Americast, a subsidiary of Ameritech, sells programming packages to many of the LECs that offer MVPD services. *See* Vestavia Petition, Exhibit E.

[869] Vestavia Petition, Exhibit E; Jerry Underwood, *BellSouth Promises First-Class Cable TV*, The Birmingham News, Dec. 3, 1996.

[870] Vestavia Petition at Exhibits A and E.

$27.49. BellSouth also offers one free month of basic and expanded service, free installation, free converter box and remote, and a 30 day money-back guarantee if the customer is not satisfied with the service, including reconnection to the former provider.[871]

230. BellSouth plans to use its reputation for customer satisfaction to encourage TCI customers to switch to its services.[872] BellSouth and TCI both plan to offer interactive services in the future.[873] TCI was not specific regarding its competitive response to BellSouth's entry, except to say that it will continue to ensure the best quality service it can.[874]

231. TCI filed a petition for determination of effective competition for the Vestavia Hills franchise area.[875] TCI claimed that Vestavia satisfied the "competing provider" effective competition test. The petition was unopposed. In March 1998, the Cable Services Bureau granted TCI's petition for special relief.[876] The Bureau found that TCI and BellSouth both serve the entire market, that their programming is comparable, and that the number of households subscribing to an MVPD other than to the largest MVPD exceeds 15 percent of the households in the market.

B. Preliminary Findings

232. Each of the actual case studies detailed above considers the rivalry between the incumbent cable system and the overbuilder, most of which are using similar wired delivery systems. The one exception is the Cities associated with Los Angeles and Orange Counties where entry occurred using MMDS technology. In the current case studies as well as in the case studies in the last report, incumbent cable operators, when challenged by a new MVPD entrant, are responding in a variety of ways. Incumbents have responded by offering better customer services, new services, new products, larger channel complements for the same price, and, in two cases, apparently cutting prices. TCI cut its basic rates in Troy and claimed that, in Thousand Oaks, it offered price discounts for long term subscriptions and refrained from a planned rate increase, thus

[871] *Id*. at Exhibit E.

[872] Jerry Underwood, *BellSouth Has Vision for Vestavia Cable TV*, Birmingham News, Dec. 1, 1996, at 1D. (Bill Todd, a spokesman for BellSouth said, "I can't emphasize how much we're going to stress service."); Patrick Rupinski, *Cable Getting Dial Tone: BellSouth to Compete with TCI in Vestavia Hills*, Birmingham Post-Herald, Nov. 20, 1996, at 1. (According to Todd, "BellSouth's name and reputation for service dependability also would be key selling points.")

[873] Phil Pierce, B*ellSouth Signing Up Cable TV Customers*, The Birmingham News, Jan. 24, 1997, at C!.

[874] *Id*.; and Jerry Underwood, *BellSouth Has Vision for Vestavia Cable TV*, Birmingham News, Dec. 1, 1996, at 1D.

[875] *See* Vestavia Petition.

[876] *Petition of TCI Cablevision of Alabama, Inc. Petition for Special Relief*, CSR 5124-E, Memorandum Opinion and Order, DA 98-549 (rel. Mar. 25, 1998).

apparently holding rates below what they would have been in the absence of entry. Ameritech also supports the proposition that price concessions are a response by incumbents to entry in some markets. [877]

233. Incumbent operators in Barron and Troy increased their service offerings in an attempt to protect or maintain customer bases in the face of entry. In Troy, some of the new channels added by the incumbent were previously offered as premium channels (such as the Disney Channel) and moved onto expanded basic service tiers ("CPSTs") at no additional cost. In Los Angeles and Orange Counties, and Troy, the channel line-up of the incumbent was larger than that of the entrant.

234. Incumbents in the above examples appear to be responding to entry on both a price and nonprice basis.[878] We do note that, in at least one instance, the initial price decline occasioned by an overbuilder was transitory.[879] In fact, it may be, given the economies of scale in delivered video programming services, that there are few competitive overbuild systems that will be economically viable over the long term.[880] Although overbuilders attempt to respond to consumer complaints about the slow speed of upgrades, poor picture quality, and the lack of customer service, overbuilders may find it difficult to earn a profit over the long run.[881]

235. In this *Report*, we find competition in the video marketplace is increasing (cable's market share has dropped from 87% to 85%). In communities where cable operators face competiton, consumers often receive benefits, including as lower prices, additional channels at same monthly rate, improved customer service or new services such as interactive programming. However, competitive alternatives and consumer choices are still developing and potential competitors to incumbent cable operators continue to face barriers to entry into markets for the delivery of video programming.

V. ADMINISTRATIVE MATTERS

236. This *1998 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).

237. It is ORDERED that the Office of Legislative and Intergovernmental Affairs shall send copies of this *1998 Report* to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

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[877] Ameritech Comments at 11.

[878] *Implementation of Sections of the Cable Television Consumer Protection and Competition Act of 1992: Rate Regulation*, MM Docket No. 92-266, Second Order on Reconsideration, Fourth Report and Order, and Fifth Notice of Proposed Rulemaking, 9 FCC Rcd 4119, 4296 (1994), Appendix C: Technical Appendix.

[879] Recently the incumbent cable company MediaOne raised its rates by about 9% in communities where it is competing with Ameritech New Media since 1996. Joe Estrella, *MediaOne Hikes Rates in Ameritech Area*, Multichannel News, Oct. 5, 1998, at 10.

[880] The Strategis Group Inc., *Cable Overbuild Competition*, May 1998, at 1-6.

[881] *Id.* at 2.

238. It is FURTHER ORDERED that the proceeding in CS Docket No. 98-102 IS TERMINATED.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary

APPENDIX A

List of Commenters

Intitial Comments

A&E Television Networks ("A&E")
ABC, Inc. ("ABC")
Ameritech New Media, Inc. ("Ameritech")
Antilles Wireless Cable TV Company ("Antilles") (late-filed)
BellSouth Corporation, BellSouth Interactive Media Services, Inc. and BellSouth Wireless Cable, Inc. ("BellSouth")
Cable Communications Agency, City of Indianapolis ("Indianapolis")
Cox Communications, Inc. ("Cox")
DIRECTV, Inc. ("DirecTV")
Gemstar International Group Limited and Starsight Telecast, Inc. ("Gemstar")
MediaOne Group, Inc. ("MediaOne")
National Cable Television Association ("NCTA")
National Rural Telecommunications Cooperative ("NRTC")
OpTel, Inc. ("OpTel")
RCN Telecom Services, Inc. ("RCN")
Satellite Broadcasting and Communications Association ("SBCA")
Small Cable Business Association ("SCBA")
Wireless Communications Association International, Inc. ("WCA")

Reply Comments

Cablevision Systems Corporation ("Cablevision")
Comcast Corporation ("Comcast")
Lifetime Entertainment Services ("Lifetime")
Motion Picture Association of America ("MPAA")
National Cable Television Association ("NCTA")
Office of the Commissioner of Baseball, National Basketball Association, National Hockey League and the National Collegiate Athletic Association ("Leagues")
RCN Telecom Services, Inc. ("RCN")
Viacom Inc. ("Viacom")

APPENDIX B

TABLE B-1
Cable Television Industry Growth: 1990 - June 1998
(in millions)

Year	U.S. Television Households ("TH")		Homes Passed ("HP")		Basic Cable Subscribers ("Subs")		TV Households Passed by Cable (HP/TH)	TV Households Subscribing (Subs/TH)	U.S. Penetration (Subs/HP)
	Total	Change From Previous Year	Total	Change From Previous Year	Total	Change From Previous Year			
1990	91.1	-0.5%	86.0	3.9%	51.7	4.9%	94.4%	56.8%	60.1%
1991	92.1	1.1%	88.4	2.8%	53.4	3.3%	96.0%	58.0%	60.4%
1992	93.1	1.1%	89.7	1.5%	55.2	3.4%	96.3%	59.3%	61.5%
1993	94.0	1.0%	90.6	1.0%	57.2	3.6%	96.4%	60.9%	63.1%
1994	94.9	1.0%	91.6	1.1%	59.7	4.4%	96.5%	62.9%	65.2%
1995	95.9	1.0%	92.7	1.2%	62.1	4.0%	96.7%	64.8%	67.0%
1996	97.0	1.1%	93.7	1.1%	63.5	2.3%	96.6%	65.5%	67.8%
1997	98.0	1.0%	94.6	1.0%	64.9	2.2%	96.5%	66.2%	68.6%
Jun 98	98.0	0.0%	95.1(e)	0.5%	65.4(e)	0.8%	97.0%	66.7%	68.8%

(e) Based on year-end estimate by Paul Kagan Associates
Note: This table contains data that was revised by the source.

Sources:

- U.S. Television Households: **1990 to 1997:** Paul Kagan Assoc., Inc., *Basic Cable Network Economics 1983-2007,* Cable Program Investor, Mar. 13, 1998, at 2. **June 1998**: 1998 from Nielsen Media Research as cited in Broadcasting & Cable, Jun. 29, 1998, at 70.

- Homes Passed and Basic Cable Subscribers: **1990 to 1997:** Paul Kagan Assoc., Inc., *History of Cable and Pay-TV Subscribers and Revenues*, Cable TV Investor, Apr.14, 1998, at 3. **January to June 1998e:** Paul Kagan Assoc., Inc., *Cable Industry 10- Year Projections*, Cable TV Investor, Aug. 10, 1998, at 4.

TABLE B-2
Premium Cable Services: 1990 - June 1998e
(in millions)

Year-end	Premium Cable Service Subscribers		Premium Units	
	Year-end Total	Change From Previous Year	Year-end Total	Change From Previous Year
1990	23.9	1.3%	39.9	7.8%
1991	24.0	0.4%	43.1	8.0%
1992	24.7	2.9%	46.5	7.9%
1993	26.4	6.9%	47.0	1.1%
1994	28.1	6.4%	47.4	0.9%
1995	29.8	6.0%	51.6	8.9%
1996	31.0	4.0%	54.6	5.8%
1997	31.5	1.6%	56.0	2.6%
Jan-Jun 98(e)	33.7	7.0%	56.4	0.7%

(e) Based on year-end estimate by Paul Kagan Associates.
Note: This table contains data that was revised by the source.

Sources:

- Premium Cable Service Subscribers: Premium Cable Services Subscribers refers to the total number of homes subscribing to one or more premium services. Each home is counted once, regardless of the number of premium services to which it subscribes. **1990 to 1997:** Paul Kagan Assoc., Inc., *History of Cable and Pay-TV Subscribers and Revenues*, Cable TV Investor, April 14, 1998, at 3. **January to June 1998e:** Paul Kagan Assoc., Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, The Cable TV Financial Databook, 1998, at 10.

- Premium Units: Premium Units refers to the total number of premium subscriptions. Each subscription is counted separately, thus may exceed the number of premium subscribers. **1990 to 1997:** Paul Kagan Assoc., Inc., *History of Cable and Pay-TV Subscribers and Revenues*, Cable TV Investor, April 14, 1998, at 3. **January to June 1998e:** Paul Kagan Assoc., Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, The Cable TV Financial Databook, 1998, at 10.

TABLE B-3
Channel Capacity of Cable Systems: October 1996 - October 1998

Channel Capacity	1996 Number of Systems	1996 Percent of Systems	1997 Number of Systems	1997 Percent of Systems	96-97 Percent Change	1998 Number of Systems	1998 Percent of Systems	97-98 Percent Change
54 and +	1,724	16.3%	1,886	19.0%	9.4%	2,040	20.7%	8.2%
30 to 53	6,410	60.8%	6,374	64.1%	-0.6%	6,288	63.9%	-1.3%
20 to 29	1,607	15.3%	971	9.8%	-39.6%	879	8.9%	-9.5%
13 to 19	337	3.2%	309	3.1%	-8.3%	258	2.6%	-16.5%
6 to 12	456	4.3%	399	4.0%	-12.5%	363	3.7%	-9.0%
5 or less	12	0.1%	10	0.1%	-16.7%	11	0.1%	10%
Not Avail.	937	-	889	-	-5.1%	880	-	-1.0%
Total	11,483	-	10,838	-	-5.6%	10,719	-	-1.1%
Sys. w/30+ channels	8,134	77.2%	8,260	83.0%	1.5%	8,328	84.6%	0.8%
Sys. w/less than 30 channels	2,412	22.8%	1,689	17.0%	-30.0%	1,511	15.4%	-10.5%

Note: Figures are as of October 1, 1996, October 1, 1997, and October 30, 1998.
Note: All "Percentage of Systems" calculation excludes "not available" data, (this includes the percentage tabulations in the categories of "Systems with 30+ channels" and "Systems with less than 30 channels.")

Sources:

- **1996:** Warren Publishing, Inc., *Channel Capacity of Existing Cable Systems,* Television & Cable Factbook: Services Volume No. 65, 1997 Edition, at I-81.
- **1997:** Warren Publishing, Inc., *Channel Capacity of Existing Cable Systems,* Television & Cable Factbook: Services Volume No. 66, 1998 Edition, at I-81.
- **1998:** Warren Publishing, Inc., Channel Capacity of Existing Cable Systems, (facsimile) (Television & Cable Factbook: Services Volume No. 67, 1999 Edition, *to be released*).

TABLE B-4
Channel Capacity for Subscribers: October 1996 - October 1998
(in millions)

Channel Capacity	1996 Number of Subscribers	1996 Percent of Subscribers	1997 Number of Subscribers	1997 Percent of Subscribers	96-97 Percent Change	1998 Number of Subscribers	1998 Percent of Subscribers	97-98 Percent Change
54 and +	33.58	55.3%	35.73	58.4%	6.4%	38.91	61.5%	8.9%
30 to 53	26.06	42.9%	24.35	39.8%	-6.6%	23.57	37.3%	-3.2%
20 to 29	0.81	1.3%	0.85	1.4%	4.9%	0.61	1.0%	-28.2%
13 to 19	0.10	0.2%	0.09	0.1%	-10.0%	0.06	0.1%	-33.3%
6 to 12	0.19	0.3%	0.19	0.3%	0.0%	0.09	0.1%	-52.6%
5 or less	0.00	0.0%	0.00	0.0%	0.0%	0.00	0.0%	0.0%
Not Avail.	0.09	-	1.22	-	1255.6%	1.20	-	-1.6%
Total	60.83	-	62.43	-	2.6%	64.44	-	3.2%
Sys. w/30+ channels	59.64	98.2%	60.08	98.2%	0.7%	62.5	98.8%	4.0%
Sys. w/less than 30	1.10	1.8%	1.13	1.8%	2.7%	0.8	1.2%	-32.7%

Note: Figures are as of October 1, 1996, October 1, 1997, and October 30, 1998.
Note: All "Percentage of Systems" calculation excludes "not available" data, (this includes the percentage tabulations in the categories of "Systems with 30+ channels" and "Systems with less than 30 channels.")

Sources:

- **1996:** Warren Publishing, Inc., *Channel Capacity of Existing Cable Systems*, Television & Cable Factbook: Services Volume No. 65, 1997 Edition, at I-81.
- **1997:** Warren Publishing, Inc., *Channel Capacity of Existing Cable Systems*, Television & Cable Factbook: Services Volume No. 66, 1998 Edition, at I-81.
- **1998:** Warren Publishing, Inc., Channel Capacity of Existing Cable Systems, (facsimile) (Television & Cable Factbook: Services Volume No. 67, 1999 Edition, *to be released*).

TABLE B-5
Growth By Network Type: 1996 - June 1998

Network Type	1996 Number of Networks	1996 Percent of Networks	1997 Number of Networks	1997 Percent of Networks	96-97 Change	Jan-June 98 Number of Networks	Jan-June 98 Percent of Networks	Half-year Change
Basic/No-Chrg	126	77.8%	131	79.9%	4.0%	133	77.7%	1.5%
Premium	18	11.1%	14	8.5%	-22.2 %	20	11.6%	42.9%
Pay Per View	7	4.3%	6	3.7%	-14.2%	9	5.3%	50.0%
Combination	11	6.8%	13	7.9%	18.1%	9	5.3%	-30.8%
Total	162		164		1.2%	171		4.3%

Note: "Combination" refers to cable networks that fall under more than one service category. For example, the Disney Channel, which is part of the basic tier in some systems, and is sold as a premium service on other systems, is considered a "combination" network.

Source:

- **1996 to April 1998:** National Cable Television Association, *National Cable Video Networks By Type of Service: 1978 - 1998*, Cable Television Developments, Spring 1998, at 6.

- **April 1998 to June 1998:** According to National Cable Television Association, there were no increases in the net number of networks between April and June and only possibly a re-categorization of existing networks, therefore numbers for April are considered appropriate for June.

TABLE B-6
Cable Industry Revenue and Cash Flow[(1)]: 1994 - 1998e

	1994	1995		1996		1997		1998
	Total	Total	% Change	Total	% Change	Total	% Change	Estimated Year-End Total
Avg Basic Subscribers (mil)	58.5	60.9	4.1%	62.8	3.1%	64.2	2.2%	65.4
Revenue Segments (mil.)								
Regulated Tiers	$15,164	$16,860	11.2%	$18,395	9.1%	$20,008	8.8%	$21,509
Pay Tiers	$4,324	$4,776	10.5%	$4,955	3.7%	$4,952	-0.1%	$4,913
Local Advertising	$1,204	$1,433	19.0%	$1,662	16.0%	$1,925	15.8%	$2,214
Pay-Per-View	$494	$535	8.3%	$647	20.9%	$823	27.2%	$781
Home Shopping	$127	$144	13.4%	$145	0.7%	$152	4.8%	$160
Advanced Svcs (Ana./Dig.)	n/a	$23	-	$91	296%	$208	128.6%	$424
Equipment and Install	$1,697	$1,787	5.3%	$2,055	15.0%	$2,320	12.9%	$2,626
Total Revenue (mil.)	$23,010	$25,558	11.4%	$27,950	9.4%	$30,388	8.7%	$32,627
Revenue Per Subscriber	$393.33	$419.67	6.7%	$445.06	6.0%	$473.33	6.4%	$498.88
Operating Cash Flow (mil.)	$9,936	$10,977	10.5%	$11,972	9.1%	$13,369	11.7%	$14,440
Cash Flow per Subscriber	$169.84	$180.25	6.1%	$190.64	5.8%	$208.24	9.2%	$220.80
Cash Flow/Total Revenue	43.2%	42.9%	-0.7%	42.8%	-0.2%	44.0%	2.8%	44.3%

(1) Cash flow as reported in this table is operating cash flow. Industry-wide figures are generally reported in terms of operating cash flow; these are the data we report here. Firm-specific cash flow figures are generally reported in terms of EBITDA ("earnings before interest, taxes, depreciation, and amortization"). This differs from previous reports where we reported the most readily available cash flow figure.

(e) Year-end estimate by Paul Kagan Associates

Note: Cash flow and its proxies (e.g. EBITDA) are often used to value the operations of a communications firm without regard to the firm's capital structure. Cash flow from operations is the net result of cash inflows from operations (revenue) and cash outflows from operations (expenses), thus ignoring non-cash charges to net income such as depreciation and amortization. Cash flow from operations indicates a firm's ability to meet its net finance and investment obligations.

Note: All "per subscriber" figures are calculated using average number of basic subscribers reported in the top row.

Sources:

- **1994 to 1997:** Average Number of Basic Subscribers: Paul Kagan Assoc., Inc., *History of Cable and Pay-TV Subscribers and Revenues*, Cable TV Investor, Apr. 14, 1998, at 3; Revenue Segments: Paul Kagan Assoc., Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, Cable TV Investor, May 20, 1997, at 9; Paul Kagan Assoc., Inc., *Total Cable TV Advertising Revenue (1980-2007)*, Cable TV Financial Databook, Aug. 1998, at 15. Operating Cash Flow: Paul Kagan Assoc., Inc., *Estimated Capital Flows In Cable TV*, Cable TV Finance, May 31, 1998, at 1.

- **1998e:** Average Number of Basic Subscribers: Paul Kagan Assoc., Inc., *Cable Industry 10- Year Projections*, Cable TV Investor, Aug. 10, 1998, at 4. Revenue Segments: Paul Kagan Assoc., Inc., *Cable Industry 10-Year Projections*, Cable TV Investor, Aug. 10, 1998, at 4; Paul Kagan Assoc., Inc., *Total Cable TV Advertising Revenue (1980-2007)*, Cable TV Financial Databook, Aug. 1998, at 15. Operating Cash Flow: Paul Kagan Assoc., Inc., *Estimated Capital Flows In Cable TV*, Cable TV Finance, May 31, 1998, at 1.

TABLE B-7
Acquisition of Capital: 1990 - June 1998
($ in million)

Year	Private Debt		Public Debt [2]		Private Equity		Public Equity		Total Capital Raised From Financing Sources[3]
	Sum Raised	% of Total[1]	Sum Raised	% of Total	Sum Raised	% of Total	Sum Raised	% of Total	
1990	$3,869	92%	$249	6%	$85	2%	$0.44	0%	$4,203
1991	$770	29%	$1,426	55%	$292	11%	$127	5%	$2,615
1992	$(1,842)	-77%	$2,493	105%	$1,711	72%	$23	1%	$2,385
1993	$(3,584)	-186%	$5,280	275%	$62	3%	$165	9%	$ 1,923
1994	$ 4,803	103%	$(715)	-154%	$100	2%	$461	10%	$ 4,649
1995	$(714)	-10%	$2,825	40%	$1,109	16%	$3,919	55%	$7,139
1996	$538	11%	$1,355	29%	$49	1%	$2,818	59%	$4,760
1997	$310	4%	$5,337	70%	$1,910	25%	$80	1%	$7,637
Jan-Jun 1998	$1,632	18%	$5,835	63%	$50	0.5%	$1,677	18%	$9,194
Total: 1990-June1998	$5,782		$ 24,085		$5,368		$9,270		$44,505
Average Raised Per Year	$680		$2,834		$632		$1,091		$5,236

(1) Column entitled "% of total" represents the percent of total capital raised from financing sources for that given year.
(2) Public Debt is expressed in terms of Net New Public Debt.
(3) Total Capital Raised From Financing Sources = Private Debt + Public Debt + Private Equity + Public Equity.

Sources:

- **1990 to 1992** - Public Debt and Private Debt: Paul Kagan Assoc., Inc., *Discussion with Elaine Blaisdell Taylor, Research Associate,* August 28, 1998. Public Equity and Private Equity: Paul Kagan Assoc., Inc., *Cable Financing Snapshot,* Cable TV Finance, January 31, 1997 at 10.
- **1993 to 1997** - Paul Kagan Assoc., Inc., *Estimated Capital Flows in Cable TV*, Cable TV Finance, May 31, 1998 at 1.
- **June 1998** - Paul Kagan Assoc., Inc., *Cable Financing Snapshot - June*, Cable TV Finance, Sept 9, 1998 at 8.

TABLE B-8
System Transactions: 1995 - June 1998

	1995	1996	95-96 Change	1997	96-97 Change	Jan - June 1998
Number of Systems Sold	142	99	-30.3%	112	13.1%	45
Total Number of Subscribers	11,065,502	7,852,900	-29.0%	11,306,800	43.9%	18,241,470
Average System Size	77,926	79,322	1.8%	100,954	27.3%	405,366
Number of Homes Passed	17,237,503	12,641,500	-26.7%	18,193,400	43.9%	29,347,076
Avg. # of Homes Passed	121,390	127,692	5.2%	162,441	27.2%	652,157
Total Dollar Value (mil.)	$20,240	$16,124	-20.3%	$22,830	41.6%	$52,377
Average Dollar Value (mil.)	$143	$163	14.0%	$204	25.2%	$1,164
Dollar Val. per Home Pass'd	$1,174	$1,275	8.6%	$1,273	-1.6%	$1,785
Dollar Val. per Subscriber	$1,829	$2,053	12.2%	$2,056	-	2,871
Cash Flow Multiple	9.7x	9.9x	2.1%	9.5x	-4.0%	13.2x

Sources:

- **1995 to 1997** - Paul Kagan Assoc., Inc., *Year-To-Date Cable System Sale Summary*, Cable TV Investor, Feb. 24, 1998, at 7.
- **Jan 1998 to June 1998 -** Paul Kagan Assoc., Inc., *Year-To-Date Cable System Sale Summary*, Cable TV Investor, August 10, 1998 at 10.

Table B-9
Cable Modem Deployment as of June 1998

MSO	City(ies)	Modem Supplier	Monthly	Install	Type of Svc.
Adelphia	Palm Beach County, FL; Coudersport, Lansdale, Mt. Lebanon, Bethel Park, West Mifflin, & Plymouth Mtg., PA; Amherst, Tonawanda, Grand Island, Buffalo & Niagra Falls, NY; Plymouth, Adams & N. Adams, MA; Hilton Head, SC; Macedonia, OH; Blacksburg, Staunton, and Wincester, VA	General Instrument/ Bay Networks	$34.95-$39.95	N/A	#Telephone line return ("Telco-return") #2-way Cable
Bresnan	Marquette, MI	Bay Networks	$39.95	N/A	#2-way Cable
Cablevision Systems	Westport, CT & Oyster Bay, NY	Bay Networks	$44.95	N/A	#2-way Cable #@home
Century	Norwich, NY	Motorola	$39.95-$49.95	$199	#Road Runner
Charter	Riverside & Pasadena, CA	General Instrument, Com21	$44.95-$64.95	up to $169	#Telco-return #2-way Cable
Comcast	Baltimore, MD; Sarasota, FL; Union, NJ; Detroit, MI; Phila., PA; Orange Cnty, CA	Motorola	$39.95 - $59.95	$175	#@home
Cox	Orange County, Eureka & San Diego, CA; Phoenix, AZ; Meridian, CT; Omaha, NE Oklahoma City, OK; Newport News, VA Providence, RI	Motorola, Bay Networks, Hybrid Networks	$41.90 - $54.95	$149 - $175	#@home #Telco-return
InterMedia (*)	Nashville Metro area and Kingsport, TN; Greenville and Spartanburg, SC	Motorola, General Instrument	$39.95-$44.95	$99-$150	#@home #Telco-return #2way expctd
Jones Intercable	Alexandria, Price William County, VA & Prince Georges Cnty, MD	Bay Networks, Hybrid Networks	$43.90	up to $125	#Jones Intrnt Chn'l (Telco) #@home
Marcus	Highland Prk & University Prk, TX	Bay Networks	$49.95	$499	#@home
Media One	Boston metro & Chestnut Hill, MA; Salem, NH; Detroit metro & Ann Arbor, MI; Dade Cnty, Jacksonville, & Broward Cnty, FL; Chicago, IL; Atlanta, GA; Los Angeles, CA	Bay Networks, General Instruments, and Motorola	$34.95 - $49.95	up to $99.95	#MediaOne Express #Telco-return
TCI	Arlington Heights, IL; Seattle, WA; East Lansing, MI; Alameda, Antioch, Dublin, Castro Valley, Fremont, Hercules, Livermore, Petaluma, Pinole, Pittsburg, Pleasanton & San Ramon, CA; Hartford, CT; Denver, CO; Garland, McKinney & Stonebridge, TX	Zenith, Bay Networks, and Motorola, Com 21	$34.95 - $44.95 ($80 for 10Mbps)	up to $69 - $150	#@home #TCI-NET
Time Warner	Akron, Canton, Youngstown & Columbus, OH; Corning, Elmira, Binghamton, Albany, Troy & Saratoga, NY; San Diego, CA; Tampa Bay, FL; Oahu, HI; Memphis, TN; El Paso, TX; Portland, ME	Motorola, Hewlett Packard, and Toshiba	$39.95-$44.95	N/A	#Road Runner

Note: Monthly Rate ("Monthly") and Installation Fees ("Install") depend on the type of service and hardware received by the customer.
Note(*): Intermedia's Nashville Metro area includes Davidson, Williamson, Rutherford, and Wilson counties, and was expected to include Sumner County in late October, 1998. Additionally, Intermedia currently offers telco-return in Kingsport, TN, but was expected to offer cable-two-way service in late November, 1998.

Sources:

- Michael Harris, *Cable Modem Commercial Launches and Trials in North America*, Kinetic Strategies, May 15, 1997. *See* http://CableDatacomNews.com/cmic7.htm.
- Telephone Interview with William Haggarty, Intermedia Partners, September 11, 1998.
- E-mail contact with Ellen East, Cox Communications, August 18, 1998.

Appendix C

Table C-1
Assessment of Competing Technologies (i)

Technology Used	Dec. 1994	Dec. 1995	Dec. 1996	Jun. 1997	Jun. 1998
(1) TV Households(ii)	95,400,000	95,900,0000.	97,000,0001.	97,000,0000.	98,000,000
Pct. Change	1.27%	52%	15%	00%	1.03%
(2) MVPD Households(iii)	63,936,620	68,487,750	72,370,950	73,646,970	76,634,200
Pct. Change	6.06%	7.12%	5.67%	1.76%	4.06%
Pct. of Households	*67.02%*	*71.42%*	*74.61%*	*75.92%*	*78.20%*
(3) Cable Subs.	59,700,000	62,100,000	63,500,0002.	64,150,000	65,400,000
Per Cent Change	4.37%	4.02%	25%	1.02%	1.95%
Pct. of MVPD Total	*93.37%*59,7	*93.37%*	*87.74%*	*87.10%*	*85.34%*
(4) MMDS Subs.	600,000	851,00041.8	1,180,000	1,100,000	1,000,000
Pct. Change	51.13%	3%	38.66%	-6.78%	-9.09%
Pct. of MVPD Total	*0.94%*	*1.24%*	*1.24%*	*1.49%*	*1.30%*
(5) SMATV Subs.	850,000	962,000	1,126,000	1,162,500	940,000
Pct. Change	-15.34%	13.18%	17.05%	3.24%	-19.14%
Pct. of MVPD Total	*1.33%*	*1.40%*	*1.56%*	*1.58%*	*1.23%*
(6) HSD Subs.	2,178,000	2,365,400	2,277,760	2,184,470	2,028,200
Pct. Change	35.11%	8.60%	-3.71%	-4.10%	-7.15%
Pct. of MVPD Total	*3.41%*	*3.45%*	*3.15%*	*2.97%*	*2.65%*
(7) DBS Subs.	602,000	2,200,000	4,285,000	5,047,000	7,200,000
Pct. Change	760.00%	265.45%	94.77%	17.78%	42.66%
Pct. of MVPD Total	*0.94%*	*3.21%*	*5.92%*	*6.85%*	*9.40%*
(8) OVS Subs.			2,190	3,000	66,000
Pct. Change				36.99%	2,100%
Pct. of MVPD Total			*0.0%*	*0.0%*	*0.09%*
(9) VDT Subs. (Trials) (iv)	6,620	9,350	0	0	0
Pct. Change		*41.24%*	-100.00%	0.00%	0.00%
Pct. of MVPD Total	*0.01%*	*0.01%*	*0.00%*	*0.00%*	*0.00%*

NOTES:

(i) Some numbers have been rounded.

(ii) The year-end 1996 and June 1997 figures are the same because Nielsen's annual update does not take effect until September, the beginning of the new television season.

(iii) The total number of MVPD households is likely to be somewhat less than the given figure due to households subscribing to the services of more than one MVPD. *See e.g. 1994 Report*, 9 FCC Rcd 7480 ¶ 74 (1994). The number of such households is likely low, however, so the given total can be seen as a reasonable estimate of the number of MVPD households. *See* (2) under Sources below.

(iv) The 1996 Act repealed the VDT framework. For details, *see 1997 Report* Section II.H. ¶108. These trials were converted to an OVS format and cable franchises.

SOURCES:

(1) Television households: 1994 from A. C. Nielsen Co. as of January of the following year cited by Veronis, Suhler & Associates, *Homes Passed by Cable and Incidence of Subscription*, The Veronis, Suhler & Associates Communications Industry Forecast, July 1995, at 145; 1995 from Nielsen Media Research as cited in Broadcasting & Cable, Jan. 8, 1996, at 50; 1996 from Nielsen Media Research as cited in Broadcasting & Cable, Jan. 13, 1997, at 118; 1997 from Nielsen Media Research as cited in *The TV Column*, Washington Post, Aug. 26, 1997, at E4; and 1998 from Nielson Media Research as cited in Broadcasting & Cable, Jun. 29, 1998, at 70.

(2) Total MVPD households: The sum of the total number of subscribers listed under each of the categories of the various technologies. *See* note (ii) above. Because there were no permanent VDT subscribers, trial VDT subscriber figures were used in 1994-95.

(3) Cable subscribers: 1994 from Paul Kagan Associates, Inc., *History of Cable and Pay-TV Subscribers and Revenues*, Cable TV Investor, June 30, 1995, at 5; 1995-97 from Paul Kagan Associates, Inc., *Paul Kagan's 10-Year Cable TV Industry Projections*, Cable TV Investor, May 20, 1997, at 9; and 1998 from Paul Kagan Associates, Inc., *Cable Industry 10-Year Cable Projections*, Cable TV Investor, Aug. 10, 1998, at 4.

(4) MMDS subscribers: 1994 from Paul Kagan Associates, Inc., *Wireless Cable Industry Projections,1992-2002*, The 1995 Wireless Cable Databook, Jan. 1995, at 23; 1995-1996 from Paul Kagan Associates, Inc., *Wireless Cable Futures*, Wireless Cable Investor, Dec. 31, 1996, at 10-11; 1997 from WCA Comments at 8. The 1998 subscribers were estimated by the FCC.

(5) SMATV subscribers: 1994 based on discussion with John Mansell, Senior Analyst, Paul Kagan Associates, Inc. and reference to *Cable & Pay TV Census -- December*, Marketing New Media, Dec. 19, 1994; 1995-1996 from *Private Cable Growth*, Private Cable Investor, Jul. 1997, at 3; 1997 subscribers were estimated by the FCC based on data from Paul Kagan Associates, Inc., *Private Cable Growth*, Private Cable Investor, Jul. 1997, at 3; and 1998 from NCTA Comments at 6.

(6) HSD subscribers: 1994 from *1994 Net Authorizations*, SkyREPORT, Feb. 1995, at 9. (The 1994 HSD subscriber figure was reduced by 1% to account for the estimated number of Canadian subscribers.) 1995 from *DTH Subscribers*, SkyREPORT, Jan. 1997, at 8 and SBCA Comments at Appendix A; 1996-1997 from *DTH Subscribers*, SkyREPORT, Nov. 1997, at 10; and 1998 from SkyREPORT.Com at http://www.skyreport.com/dth_us.htm.

(7) DBS subscribers: 1994 from Kent Gibbons, *DBS: We're Walking the Walk*, Multichannel News, Jan. 16, 1995, at 3, 52; 1995 from *DTH Subscribers*, SkyREPORT, Jan. 1997, at 8; 1996-1997 from *DTH Subscribers*, SkyREPORT, Nov. 1997, at 10; and 1998 from Minal J. Damani and Jennifer E. Sharpe, *U.S. DBS Marketplace: 1998*, The Strategis Group, Jul. 1998, at 6.

(8) OVS subscribers: 1996 from Bell Atlantic Comments at 5. The 1997 and 1998 subscribers were estimated by the FCC.

(9) VDT trial subscribers: 1994-95 from Section 214 Applications, ex parte letters and associated filings with the FCC.

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

Range of Clustered Subscribers (thousands)	1994		1995		1996		1997	
	Clusters	Subs. (millions)	Clusters	Subs. (millions)	Clusters	Subs. (millions)	Clusters	Subs. (millions)
100-199	58	8.0	76	10.4	76	10.3	49	6.7
200-299	26	6.0	35	8.4	34	8.3	33	8.2
300-399	6	2.0	8	2.8	11	3.7	11	3.8
400-499	3	1.3	10	4.5	8	3.6	8	3.7
> 500	4	2.8	8	5.1	10	7.7	16	11.9
Total	**97**	**20.1**	**137**	**31.2**	**139**	**33.6**	**117**	**34.3**

Sources:

Paul Kagan Associates, Inc., *Major Cable TV Systems/Clusters,* The Cable TV Financial Databook, 1995, at 38-39; 1996, at 38-40; 1997, at 39-41; 1998, at 38-42.

TABLE C-3
1998 MVPD Horizontal Concentration Nationwide[1]

Rank	Company	Per Cent of Subscribers[2]
1	TCI	26.48
2	Time Warner	16.04
3	MediaOne	6.32
4	Comcast	5.79
Top 4		***54.63***
5	DirecTV	4.60
6	Cox	4.24
7	Adelphia	2.60
8	Century	1.72
9	Charter	1.62
10	Marcus	1.62
Top 10		***71.04***
Top 25		***80.99***
Top 50		***86.08***
	HHI	**1096**[3]

[1]MSO subscriber totals as of May 1998, and reported in *Top 100 Cable System Operators as of May1998*, Cable TV Investor, (Sept. 11, 1998), pp. 7-8. There is no double counting of subscribers. If a cable operator or DBS provider is partially owned by more than one MSO, it is assigned to the largest MSO. Subscribers for DirecTV and Primestar based on *DTH Subscribers* (Chart), SkyREPORT, April 1998, at 2.

[2]The total number of MVPD subscribers used to calculate the HHI is 73,634,200 from Table C-1. Differences in totals reflect rounding.

[3]The HHI is calculated on the basis of market shares for the top 50 companies. Because all of the remaining MVPDs have very small shares of the market, an HHI calculation that included all cable system operators could only be slightly higher (no more than 2-3 points) than the given HHI.

Table C-4
Consummated and Announced Cable Transactions
July 1997 - June 1998

YEAR	BUYER	SELLER	SYSTEMS	PRICE** (Mil.)	SUBS (Actual)	PRICE/ SUB.***	CASH FLOW MULT
Jul-97	Genesis Cbl	McDnld Invest	Jackson Co. GA	$45	21,000	$2,035	8.9
Jul-97	Fanch Comm	Leonard Comm	Hendricks IN	$6	5,000	$1,328	7.7
Jul-97	G Force LLC	InterMeda	Kauai HI	$24	$12,000	$2,065	8.6
Jul-97	G Force LLC	Rifkin & Assoc	Kauai HI	$14	8,000	$1,744	8.7
Jul-97	Intermedia IV	TCI	KY	$854.1	425,000	$2,010	11.0
Jul-97	InterMedia Ptnrs	TCI	KY	$946	425,000	$2,226	10.1
Jul-97	Triax Midwest	Triax Assoc	Roselawn IN	$50	33,000	$1,509	7.3
Jul-97 (c)	TCI/TCA JV	TCA Cable	TX, LA, NM	$285	155,000	$1,839	8.7
Jul-97 (c)	TCI/TCA JV	TCI	TX, LA	$310	150,000	$2,068	9.2
Aug-97	Mediacom	Cablevision	10 States	$315	265,000	$1,189	8.9
Aug-97	Jones Inter	Jones Fund	Albuquerque NM	$223	113,000	$1,977	8.6
Aug-97	FrntrVsn	Cox Comm	Central OH	$144	85,000	$1,694	9.0
Aug-97	Genesis	Milestone	Hoke Co. NC	$2	2,000	$1,145	7.0
Aug-97	Insight Comm	Cox Comm	Lafayette IL	$77	38,000	$2,018	9.6
Aug-97	Charter	Sonic	Logan UT, CA	$183	117,000	$1,562	8.0
Aug-97	Cox Comm	Insight Comm	Phoenix AZ	$77	36,000	$2,131	9.1
Aug-97	Insight Comm	Cablevision	Rockford IL	$97	65,000	$1,492	9.5
Sept-97	Post Newsweek*	TCA Cable*	Blackwell OK	$28	17,000	$1,679	8.9
Sept-97	Time Warner*	TCI*	FL	$360	200,000	$1,800	10.0
Sept-97	Time Warner*	TCI*	HI, OH, NY	$270	133,000	$2,030	10.2
Sept-97	TCI*	Time Warner*	IL	$144	72,000	$2,000	10.3
Sept-97	TCI*	Time Warner*	IL, NJ, PA	$360	170,000	$2,118	10.3
Sept-97	TCA Cable*	Post Newsweek*	Lufkin TX	$28	16,000	$1,819	8.9
Sept-97	Time Warner*	TCI*	ME, WI	$144	77,000	$1,870	9.1
Sept-97	Bresnan/TCI JV	TCI	MN, MI, NE, WI	$800	445,000	$1,798	8.6

YEAR	BUYER	SELLER	SYSTEMS	PRICE** (Mil.)	SUBS (Actual)	PRICE/ SUB.***	CASH FLOW MULT
Sept-97	Time Warner*	TCI*	NY	$80	62,000	$1,290	6.2
Sept-97 (c)	KC Cable	TCI	Overland KS	$258	93,000	$2,777	12.3
Sept-97	TCI*	Time Warner*	PA, WY, MO	$80	55,000	$1,455	8.1
Sept-97	TCI*	Time Warner*	Portland OR	$270	126,000	$2,143	10.2
Sept-97	TCI*	Time Warner*	TX	$203	117,000	$1,735	8.7
Sept-97	Time Warner*	TCI*	TX	$203	126,000	$1,607	8.2
Sept-97	TCI/TW JV	TCI	TX	$1,326	520,000	$2,550	9.1
Sept-97	TCI/TW JV	TW	TX	$1,176	510,000	$2,306	12.5
Sept-97	Prime Cable	SBC Corp	VA, MD	$637	268,000	$2,377	8.2
Oct-97	Helicon Corp	Booth Comm	Anderson SC	$31	16,000	$1,934	9.6
Oct-97	Harron Comm	Auburn Cable	Auburn NY	$28	14,000	$1,958	10.2
Oct-97	Helicon Corp	Booth Comm	Boone NC	$35	19,000	$1,852	9.5
Oct-97	Comcast	Jones Fund 14	Broward FL	$140	55,000	$2,545	10.3
Oct-97	Helicon Corp	Calhoun TV	Calhoun TN	$1	1,000	$1,285	6.6
Oct-97	Optel	Phonoscope	Houston TX	$37	34,000	$1,074	8.8
Oct-97	TWE/AN	Time Warner	NY, FL, NC	$1,327	640,000	$2,073	9.4
Nov-97	CableOne*	Time Warner*	Anniston AL	$65	36,000	$1,814	9.5
Nov-97	Avalon Ptrs	Pegasus	CT, NH	$30	15,000	$1,954	9.0
Nov-97	Renaissance	Time Warner	Jackson , TN	$291	125,000	$2,328	9.8
Nov-97	Marcus Cable	McDonald Inv	Mountain Brook, AL	$62	23,000	$2,680	9.8
Nov-97	Fanch Comm	Spring Green	Spring Green , WI	$10	9,000	$1,051	7.3
Nov-97	CableOne	Jones Fund 14	Surfside SC	$52	25,000	$2,060	10.3
Dec-97 (c)	TCI*	Insight Comm*	Brigham UT	$125	58,000	$2,160	9.2
Dec-97 (c)	Insight Comm*	TCI*	Evansville IN	$131	63,000	$2,098	9.7
Dec-97	TCI*	MediaOne*	Chicago IL	$1,284	542,000	$2,368	10.6
Dec-97	Comcast	Marcus Cable	DE, MD	$66	27,000	$2,472	9.9
Dec-97	TCI*	Century Comm*	Fairfield CA	$191	90,000	$2,121	9.7

YEAR	BUYER	SELLER	SYSTEMS	PRICE** (Mil.)	SUBS (Actual)	PRICE/ SUB.***	CASH FLOW MULT
Dec-97	TCI/Centurt JV	TCI	LA Co. Ventura CA	$455	245,000	$1,857	9.0
Dec-97 (c)	Insight/TCI JV	TCI	Richmond IN	$370	160,000	$2,313	9.6
Dec-97 (c)	Insight/TCI JV	Insight Comm	Jefferson IN	$377	160,000	$2,359	9.8
Dec-97	Century Comm*	TCI*	S.Fernando CA	$167	90,000	$1,858	9.0
Dec-97	MediaOne*	TCI*	Southeast, FL, GA	$1,110	508,000	$2,186	10.7
Dec-97	TCI/Century JV	Century Comm	Sherman Oaks CA	$1,342	500,000	$2,684	10.9
Dec-97 (c)	Multimedia*	TCI*	Topeka KS	$201	128,000	$1,569	8.8
Dec-97 (c)	TCI*	MultiMedia*	IL, IN	$189	93,000	$2,030	9.5
Jan-98	TW Fanch	Cablevision	AllenTwp OH	$9	7,000	$1,320	8.1
Jan-98	Cablevision*	TCI*	Bradford CT	$75	60,000	$1,250	6.6
Jan-98	Rapid Comm	Rural MO	Brandson MO	$12	11,000	$1,122	7.8
Jan-98	Peak\TCI JV	Halcyon	Dequeen AR	$38	27,000	$1,407	9.0
Jan-98	Adelphia	Sandler Media	Hancock MD	$24	16,000	$1,476	7.9
Jan-98	Cablevision	TCI	Hartford CT	$380	173,000	$2,197	10.0
Jan-98	PEAK\TCI JV	TCI	Henryetta OK	$147	87,000	$1,690	9.9
Jan-98	TCI*	Cablevision*	Kalamazoo MI	$75	50,000	$1,500	7.0
Jan-98	Gans	King George	King George VA	$6	4,000	$1,710	8.6
Jan-98	Northland	InterMedia	Toccoa GA	$93	54,000	$1,710	8.8
Jan-98	Adelphia	Cablevision	Wellsville NY	$12	12,000	$943	5.4
Jan-98	Adams CATV	Cablevision	Windsor NY	$5	4,000	$1,188	6.8
Feb-98	Bresnan	Rifkin	Bridgeport MI	$17	11,000	$1,545	7.4
Feb-98	E. Cleveland	TBA Inc	E Cleveland OH	$6	4,000	$1,771	8.3
Feb-98	Blackstone	Galaxy Media	Kemmerer WY	$5	4,000	$1,300	8.0
Feb-98	Harron Comm	Community TV	Laconia NH	$113	57,000	$1,980	9.6
Mar-98	TMC Holdings	Marcus Cable	Waterbury CT	$150	63,000	$2,381	10.0
Mar-98	CableOne	Marcus	TX, OK, MS, LA	$151	72,000	$2,112	9.6

YEAR	BUYER	SELLER	SYSTEMS	PRICE** (Mil.)	SUBS (Actual)	PRICE/ SUB.***	CASH FLOW MULT
Mar-98	Classic Comm	CableOne	TX, OK, KS, MO	$44	29,000	$1,523	8.3
Mar-98	Frontiervision	N.Oakland	Sumpter MI	$14	8,000	$1,743	7.7
Mar-98	Frontiervision	TCI	Port Clinton OH	$10	7,000	$1,429	6.6
Mar-98	CND Acquisition	King Kable	Andrews NC	$2	2,000	$750	6.9
Mar-98	Upsala Coop.	Midcontinent	Grey Eagle MN	$.5	500	$1,000	8.1
Mar-98	Galaxy Cablevision	USA Cablevision	Brooks/Colquitt Cts. GA	$.1	500	$313	2.8
Apr-98	Vulcan Ventures	Marcus	TX	$2,775	1,100,000	$2,523	11.1
Apr-98	Jones Intercable	Jones	Palmdale CA	$138	64,000	$2,176	10.4
Apr-98 (c)	Time Warner*	Cablevision*	Rensselaer NY	$57	30,000	$1,944	9.2
Apr-98 (c)	Cablevision*	Time Warner*	Litchfield CT	$49	27,000	$1,835	9.2
Apr-98	CableOne	Bresnan Comm	Grenada MS	$11	7,000	$1,564	7.3
Apr-98	Jones InterCable	Jones	Littlerock CA	$11	6,000	$1,881	8.8
Apr-98	TCI	Jones Fund	Chicago IL	$597	255,000	$2,340	9.8
Apr-98	TCI/Cox JV	TCI	Tulsa OK	$285	150,000	$1,902	8.2
Apr-98	TCI/Cox JV	Cox Comm.	Oklahoma City OK	$285	120,000	$2,378	11.6
Apr-98	Triax	Marcus Cable	Ottawa IL	$66	33,000	$2,018	9.0
Apr-98	Vista Comm	Smyrna Cable TV	Smyrna GA	$62	27,000	$2,351	9.2
Apr-98	TW Fanch	TCI	MD, OH, VA, WV	$274	148,000	$1,858	9.2
May-98	Cox Comm	Community Cable	Las Vegas NV	$1,137	319,000	$3,564	13.0
May-98	Millennium	InterMedia Partners	Arundel MD	$130	54,000	$2,399	9.3
May-98	Amer Cable Ent	Booth American	Victorville CA	$74	32,000	$2,300	9.3
May-98	N. Willamette	Northland Comm	Woodburn OR	$7	4,000	$1,605	6.5
May-98	Cox Comm	TW-Douglas Cable	Omaha NE	$6	5,000	$1,224	7.9
May-98	Jones	Bresnan	GA	$50	24,000	$2,114	8.8
Jun-98	Savage Comm.	Midcontinent	East Gull Lake MN	$1.1	1,000	$1,100	8.7

YEAR	BUYER	SELLER	SYSTEMS	PRICE** (Mil.)	SUBS (Actual)	PRICE/ SUB.***	CASH FLOW MULT
Jun-98	MediaOne	Time Warner	Dearborn, Wayne MI	$60	30,400	$1,974	9.7
Jun-98	Insight	Coaxial Comm.	Columbus OH	$183	91,000	$2,011	9.5
Jun-98	AT&T	TCI	Denver	$44,100	15,100,000	$2,923	13.7
Jun-98	Avalon Cable	Cable Michigan	MI	$435	350,000	$2,071	10.2
Jun-98	Avalon Cable	Amrac	Hadley MA	$9	5,000	$1,728	8.8
			Grand Total	**$70,326,800**	**27,383,400**		
			Total Consummated	$1,982,000	1,087,000		

NOTES:

* System swaps.

** The transaction prices are from Paul Kagan Assocs. The transaction price is dependent upon the terms of each transaction and may or may not include debt.

*** The calculations of Price/Basic Subscriber are from Paul Kagan Assocs. These calculations are subject to rounding and reporting inconsistencies.

(c) Indicates a "consummated transaction."

SOURCES:

Paul Kagan Associates, Inc., *Announced/Proposed Cable System Sales*, Cable TV Investor, Jul. 9, 1997, at 10; Aug. 22, 1997, at 8; Sept. 10, 1997, at 4; Oct. 9, 1997, at 14; Nov. 21, 1997, at 9; Dec. 29, 1997, at 11; Jan. 30, 1998, at 8; Feb. 24, 1998, at 8; Mar. 13, 1998, at 10; Apr. 14, 1998, at 11; May 26, 1998, at 5; Jun. 30, 1998, at 7; Aug. 10, 1998, at 10; Sept. 11, 1998, at 5. Communications Daily, Mass Media ,Nov. 2, 1998; Communications Daily, Mass Media ,Nov. 3, 1998; TCI Press Releases: *TCIC and TCA Finalize Partnership*, Feb. 2, 1998, available at http://www.tci.com/tci.com/press/980202.html; *TCIC Completes Transaction with Multimedia to Exchange Cable Systems in Illinois, Indiana and Kansas*, Aug. 31, 1998, available at http://www.tci.com/tci.com/press/980831.html; *TCIC Completes Contribution of Overland Park, Kansas Cable System to TCIC/Time Warner Partnership*, Aug. 31, 1998, available at http://www.tci.com/tci.com/press/980831a.html.

Appendix D

Table D-1
MSO Ownership in National Video Programming Services

Programming Service	Launch Date	MSO Ownership (%)
Action Pay-Per-View	Sept-90	TCI (35)
AMC (American Movie Classics)	Oct-84	Cablevision (75)
Animal Planet	Oct-96	TCI (49), Cox (24.6)
BBC America	Mar-98	TCI (24.6), Cox (12.3)
BET (Black Entertainment Television)	Jan-80	TCI (35)
BET on Jazz	Jan-96	TCI (35)
BET Movies	Feb-97	TCI (81)
The Box Worldwide	Dec-85	TCI (78)
Bravo	Feb-80	Cablevision (75)
Canales ñ (1) (Digital package of 8 video channels)	Aug-98	TCI (100)
Cartoon Network	Oct-92	Time Warner (100)
CBS Eye on People	Mar-97	TCI (24.6), Cox (12.3)
Cinemax	Aug-80	Time Warner (100)
CNN	Jun-80	Time Warner (100)
CNNfn (The Financial Network)	Dec-95	Time Warner (100)
CNN Headline News	Jan-82	Time Warner (100)
CNN International	Jan-95	Time Warner (100)
CNN/SI	Dec-96	Time Warner (100)
Comedy Central	Apr-91	Time Warner (50)
Court TV	Jul-91	TCI (50), Time Warner (50)

Programming Service	Launch Date	MSO Ownership (%)
Discovery Channel	Jun-85	TCI (49), Cox (24.6)
Discovery Civilization	Oct-96	TCI (49), Cox (24.6)
Discovery Health	Jun-98	TCI (49), Cox (24.6)
Discovery Home & Leisure	Oct-96	TCI (49), Cox (24.6)
Discovery Kids	Oct-96	TCI (49), Cox (24.6)
Discovery Science	Oct-96	TCI (49), Cox (24.6)
E! Entertainment	Jun-90	Comcast (39.6), MediaOne (10.4), TCI (10.4)
Encore	Apr-91	TCI (100)
Encore Love Stories	Jul-94	TCI (100)
Encore Westerns	Jul-94	TCI (100)
Encore Mysteries	Jul-94	TCI (100)
Encore Action	Sept-94	TCI (100)
Encore True Stories and Drama	Sept-94	TCI (100)
Encore WAM! America's Youth Network	Sept-94	TCI (100)
FiT TV	Dec-93	TCI (50)
Food Network	Nov-93	MediaOne (5), Cox (1), Time Warner (1)
Fox Sports Americas (formerly Prime Deportiva)	Dec-93	TCI (25)
Fox Sports Direct	1989	TCI (50)
Fox Sports Net	1996	TCI (25), Cablevison (37.5)
Fox Sports World	1997	TCI (50)
FX	Oct-94	TCI (50)
GEMS International Television	Apr-93	Cox (50)
Golf Channel	Jan-95	MediaOne (14.4), Comcast (43.3)
Great American Country	Dec-95	Jones (100)

Programming Service	Launch Date	MSO Ownership (%)
HBO (Home Box Office)	Nov-72	Time Warner (100)
HBO 2	Dec-75	Time Warner (100)
HBO 3	Oct-93	Time Warner (100)
HBO Family	Dec-96	Time Warner (100)
Home Shopping Network	Jul-85	TCI (18.6), MediaOne (<1)
Home Shopping (Spree!)	Sep-86	TCI (18.6), MediaOne (<1)
Independent Film Channel	Sep-94	Cablevision (75)
International Channel	Jul-90	TCI (90)
Kaleidoscope	Sep-90	TCI (12)
Knowledge TV (formerly Mind Extension University)	Nov-87	Jones (97)
MoreMAX (formerly Cinemax2)	Aug-91	Time Warner (100)
MuchMusic USA	Jul-94	Cablevision (75)
Odyssey Channel	Oct-93	TCI (32.5)
Outdoor Life Network	Jul-95	Cox (33.3), TCI (16.7), Comcast (8.3), MediaOne (8.3)
Ovation: The Arts Network	Apr-96	Time Warner (4.2)
Prevue Channel	Jan-88	TCI (44)
PIN (Product Information Network)	Apr-94	Cox (45)
QVC	Nov-86	Comcast (57), TCI (43)
Romance Classics	Jan-97	Cablevision (75)
Sci-Fi Channel	Sept-92	TCI (18.6), MediaOne (<1)
Sneak Prevue	May-91	TCI (12)
Speedvision	Dec-95	Cox (33.3), TCI (16.7), Comcast (8.3), MediaOne (8.3)

Programming Service	Launch Date	MSO Ownership (%)
Starz!	Feb-94	TCI (100)
Starz!2	Mar-96	TCI (100)
Style	Oct-98	Comcast (39.6), MediaOne (10.4), TCI (10.4)
TBS	Dec-76	Time Warner (100)
Telemundo	Jan-87	TCI (50)
TLC (The Learning Channel)	Nov-80	TCI (49), Cox (24.6)
TNT (Turner Network Television)	Oct-88	Time Warner (100)
Travel Channel	Feb-87	TCI (49), Cox (24.6)
Turner Classic Movies	Apr-94	Time Warner (100)
USA Network	Apr-80	TCI (18.6), MediaOne (<1)
Viewers Choice 1-10 and Hot Choice (11 multiplexed channels)	Nov-85	Cox (20), Time Warner (17), MediaOne (10), Comcast (10), TCI (10)
Wingspan: Air & Space Channel	Apr-98	TCI (49), Cox (24.6)

Notes:
(1) Canales ñ, TCI Liberty's digital package of Spanish-language channels, consists of Discovery en Español, Fox Sports Americas, CNN en Español, CBS Telenoticias, CineLatino, BoxTejano, BoxExitos, Canal 9 and eight channels of DMX Latino-formatted digital music.

TCI has a 10% ownership interest in Time Warner, Inc. This investment includes all of Time Warner Inc.'s subsidiaries, including a 10% ownership interest in Time Warner Cable. This also includes a 10% ownership interest in Time Warner/Turner programming services including, but not limited to, CNN, Cartoon Network, Headline News, TNT, Turner Classic Movies, TBS Superstation, CNNfn, CNN/SI, HBO, Cinemax, Comedy Channel and the WB Television Network.

MediaOne has a 25% ownership interest in Time Warner Entertainment, L.P., which includes a 25% ownership interest in Time Warner Cable.

Sources:
National Cable Television Assoc, *National Video Services*, Cable Television Developments, Spring 1998, at 27-97. Paul Kagan Assoc., Inc., *Libery Media Valuation*, Cable Programming Investor, July 7, 1998 3-5. *Libery Media Group Reports 2nd Quarter Results*, website http://www.tci.com/tci.com/press/980813b.html

on Aug. 21, 1998. *Liberty Media Assets as of 5/15/98*, website http://www.tci.com/libertymedia.com/liberty.pgs/libertyfinancial.html on Aug. 21, 1998. Eben Shapiro and John Lippman, *Murdoch Sells TV Guide to an Affiliate of TCI*, Wall Street Journal, Jun. 12, 1998, at B1. Time Warner, Inc., 1997 Annual Report. Donaldson, Lufkin & Jenrette, Equity and Research: Broadcasting and Cable, Table 15: U S West Media Group Valuation of Non-Consolidated/Non-Domestic Cable Investors, March 10, 1998, at 35. U S West, Inc., Form 10-K/A for the fiscal year ended Dec. 31, 1997. Comcast Corp., Form 10-K for the fiscal year ended Dec. 31, 1997. *Comcast Content*, at http://www.comcast.com/content/qvc.htm on Aug. 21, 1998. *Comcast Other Investments*, at http://www.comcast.com/other/index.htm on Aug. 21, 1998. *Cox Strategtic Investment*s, at http://www.cox.com/financials/investments.html on Aug. 21, 1998. Cablevisions System Corp., Form 10-K for the fiscal year ended Dec. 31, 1997. Adelphia Communications Corp., Form 10-K/A for the fiscal year ended Dec. 31, 1997. Jones Growth Partners II, L.P., Form 10-K for the fiscal year ended Dec. 31, 1997.

Table D-2
National Video Programming Services
Not Affiliated With a Cable Operator

Programming Service	Launch Date
Adam & Eve Channel	Feb-94
Adultvision	Jul-95
All News Channel	Nov-89
America's Health Network	Mar-96
America's Voice	Dec-93
ANA Television Network	Dec-91
A&E (Arts & Entertainment)	Feb-84
Asian American Satellite TV	Jan-92
B-Movie Channel	May-98
Bloomberg Information Television	Jan-95
CBS TeleNoticias	1997
CNET: The Computer Network	Jan-95
C-SPAN (1)	Mar-79
C-SPAN2 (1)	Jun-86
Cable Video Store	Apr-86
Canal de Noticias NBC	Mar-93
Canal Sur	Aug-91
CelticVision	Mar-95
Channel America Television Network	Jun-88
Channel Earth	Mar-97
Children's Cable Network	May-95
Cine Latino	Dec-94
Classic Arts Showcase	May-94

Programming Service	Launch Date
CMT (Country Music Television)	Mar-83
CNBC	Apr-89
Consumer Resource Network	Dec-94
Crime Channel	Jul-93
Deep Dish TV	Jan-86
Disney Channel	Apr-83
Do-it-Yourself	Jan-98
Dream TV Network	Nov-96
Ecology Channel	Nov-94
Employment Channel	Feb-92
The Erotic Network (TEN)	Aug-98
ESPN	Sep-79
ESPN2	Oct-93
ESPN Classic Sports (formerly Classic Sports Network)	May-95
ESPNEWS	Nov-96
Ethnic-American Broadcasting Co.	1992
EWTN: Global Catholic Network	Aug-81
Fashion Network	Jul-96
Filipino Channel	Apr-91
Flix	Aug-92
Fox Family Channel (formerly The Family Channel)	Apr-77
Foxnet	Jul-91
Fox News Channel	Oct-96
FXM: Movies from Fox	Oct-94
Galavision	Oct-79
Game Show Network	Dec-94
Gay Entertainment Television	Nov 95

Programming Service	Launch Date
Goodlife Television Network (formerly Nostalgia Channel)	Jun-98
History Channel	Jan-95
Home & Garden Television	Dec-94
HTV	Aug-95
INSP (Inspirational Nework)	Apr-78
Jewish Television Network	1981
Ladbroke Racing Channel	Nov-84
Las Vegas Television Network	Nov-91
Lifetime Television	Feb-84
Lifetime Movie Network	Jun-98
Lottery Channel	Nov-95
TMC (The Movie Channel)	Dec-79
Military Channel	Jul-98
Mor Music TV	Aug-92
MBC Gospel Network	Nov-98
MSNBC	Jul-96
MTV: Music Television	Aug-81
MTV Networks Latin America (formerly MTV Latino)	Oct-93
M2: Music Television	Aug-96
Music Zone	Apr-95
My Pet TV	Sep-96
NASA Television	Jul-91
National & International Singles Television Network	Apr-95
NET - Political NewsTalk Network	Dec-93
Network One	Dec-93
Newsworld International	Sep-94

Programming Service	Launch Date
Nickelodeon/Nick at Nite	Apr-79
Nick at Nite's TV Land	Apr-96
Oasis TV	Sept-97
Outdoor Channel	Apr-93
Planet Central Television	May-95
Playboy TV	Nov-82
Praise Television	Dec-96
Recovery Network	Feb-97
SCOLA	Aug-87
Shop at Home	Jun-86
Showtime	Jul-76
SingleVision	Jun-94
Soap Channel	Jul-98
Spice	May-89
Spice Hot	1998
Student Film Network	Nov-94
Sun TV	Aug-96
Sundance Channel	Feb-96
Telemundo	Jan-87
TNN: The Nashville Network	Mar-83
Toon Disney	Apr-98
Total Communications Network	Nov-95
Trinity Broadcasting Network	Apr-78
TRIO	Sep-94
Tropical Television Network	Aug-96
TV 5 - La Television Internationale	Jan-98

Programming Service	Launch Date
TV Asia	Apr-93
TV Japan	Jul-91
TVN Digital Cable (Comprised of digital multiplex of 32 channels as well as 3 analog channels)	Feb-98
U Network	Oct-89
Univision	Sep-76
ValueVision	Oct-91
VH-1	Jan-85
Via TV Network	Aug-93
Video Catalog Channel	Oct-91
Weather Channel	May-82
WorldJazz	Jul-95
Worship Network	Sep-92
ZDTV: Your Computer Channel	May-98
Z Music	Mar-93

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

Sources:
National Cable Television Assoc, *National Video Services*, Cable Television Developments, Spring 1998, at 27-97.

TABLE D-3
Regional Video Programming Services

Programming Service	Launch Date	MSO Ownerhsip (%)
Arabic Channel	Apr-91	
Automotive Television Network (ATN)	Sep-95	
BAYTV	Jul-94	TCI (49)
Cable TV Network of New Jersey	Jul-93	
California Channel	Feb-91	
Casa Club TV	Jul-97	
ChicagoLand Television News (CLTV)	Jan-93	
CN8 - The Comcast Network	1996	Comcast (100)
Comcast SportsNet	Oct-97	Comcast (46)
County Telvision Network San Diego	Jul-96	
Ecumenical Television Channel	1983	
Empire Sports Network	Dec-90	
Florida's News Channel	Sep-98	
Fox Sports Arizona	Sep-96	TCI (50)
Fox Sports Bay Area	Apr-90	TCI (35)
Fox Sports Chicago	Jan-84	TCI (35), Cablevision (45)
Fox Sports Cincinnati	1989	TCI (20), Cablevision (45)
Fox Sports Detroit	Sep-97	TCI (50)
Fox Sports Intermountain West	1990	TCI (50)
Fox Sports Midwest	1989	TCI (50)
Fox Sports New England	Nov-81	TCI (10), Cablevision (22.5), MediaOne (50)
Fox Sports New York	1982	TCI (18), Cablevision (41.5)

Programming Service	Launch Date	MSO Ownerhsip (%)
Fox Sports Northwest	Nov-88	TCI (50)
Fox Sports Ohio	Feb-89	TCI (20), Cablevision (45)
Fox Sports Pacific	Unknown	Cablevision (45)
Fox Sports Pittsburgh	Apr-86	TCI (50)
Fox Sports Rocky Mountain	Nov-88	TCI (50)
Fox Sports South	Aug-90	TCI (44)
Fox Sports Southwest	Jan-83	TCI (50)
Fox Sports West	Oct-85	TCI (50)
Fox Sports West 2	Jan-97	TCI (50)
Hip Hop Network	Jan-97	
Home Team Sports (HTS)	Apr-84	TCI (17)
International Television Broadcasting (ITV)	Apr-86	
Madison Square Garden Network (MSG)	Oct-69	TCI (18), Cablevision (41.5)
MSG Metro Guide	Aug-98	Cablevision (100)
MSG Traffic and Weather	Aug-98	Cablevision (100)
MSG Metro Learning Channel	Aug-98	Cablevision (100)
MediaOne	Dec-95	MediaOne (100)
Midwest Sports Channel	Mar-89	
Neighborhood News L.I.	Unknown	Cablevision (75)
New England Cable News	Mar-92	MediaOne (50)
New England Sports Network (NESN)	Mar-84	
New York 1 News	Sep-92	Time Warner
News 12 Connecticut	Jun-95	Cablevision (75)
News 12 Long Island	Dec-86	Cablevision (75)
News 12 New Jersey	Mar-96	Cablevision (75)
News 12 Westchester	Nov-95	Cablevision (75)

Programming Service	Launch Date	MSO Ownerhsip (%)
Newschannel 8	Oct-91	
Nippon Golden Network	Jan-82	
NorthWest Cable News	Dec-95	
Orange County NewsChannel	Sep-90	
PASS Sports (Pro-Am Sports System)	Apr-84	
Pennsylvania Cable Network (PCN)	Sep-79	
Pittsburgh Cable News Channel (PCNC)	Jan-94	
PRISM	Sep-76	
Six News Now	Jul-95	
South Florida Newschannel	1998	
SportsChannel Florida	Dec-87	TCI (6), Cablevisoin (13.5)
SportsChannel New York	1976	
Sunshine Network	Mar-88	TCI (27), MediaOne (7.5), Comcast (16), Cox (5.3)

Sources:
National Cable Television Assoc, *Regional Video Services*, Cable Television Developments, Spring 1998, at 98-116. Liberty Media Press Release, *Cablevision's Rainbow Media and Fox/Liberty Complete Transaction to Create Sports Partnership*, Dec. 18, 1997, at 1. R. Thomas Umstead, *ESPN Lands $600M NHL Deal*, Multichannel News, Aug. 31, 1998, at 10. R. Thomas Umstead, *Ops Eye Low-Cost Local Heroes*, Multichannel News, May 4, 1998, at 74. See also Table D-1 Sources.

TABLE D-4
Planned Programming Services

Programming Service	Planned Launch Date, If Announced
ABZ	Not Announced
American Legal Network	Not Announced
American Pop	4th Qtr 1998
American West Network	Not Announced
Annenburg/CPB Channel	Not Announced
Anthropology Programming and Entertainment	Not Announced
Anti-Aging Network	Not Announced
Arts & Antiques Network	Not Announced
Auto Channel	1999
Baby TV	1998
Beauty Channel	Not Announced
Benefit Network	Not Announced
Boating Channel	Not Announced
Booknet	Mid-1999
Career & Education Opportunity Channel	Not Announced
Catalogue TV	Not Announced
CEO Channel	Not Announced
Channel 500	Not Announced
Collectors Channel	Not Announced
Comedy.net	Not Announced
Documentary Channel	2nd Qtr. 1999
Enrichment Channel	Not Announced
Football Channel Network	Not Announced
Gaming Entertainment Television	2nd Qtr. 1999

Programming Service	Expected Launch Date
Genesis Network	Not Announced
GETv Network	Not Announced
Global Village Network	Not Announced
Hobby Craft Communications	2nd Qtr. 1999
Home Improvement TV Network	Not Announced
Jim Henson Network	Not Announced
Locomotion	4th Qtr. 1998
M1	Not Announced
Martial Arts Action Network	1999
MBC Movie Network	Not Announced
Men's Entertainment Network (MEN)	3rd Qtr. 1999
Museum Channel	Not Announced
Native American Nations Program Network	Not Announced
Nickelodeon Game & Sports	January 1999
Nick Too	January 1999
Noggin	January 1999
Orb TV	Not Announced
Outlet Mall Network	Not Announced
Oxygen	January 2000
Parents Channel	Not Announced
Performance Showcase	Not Announced
Planet Central Television	Not Announced
Premiere Horse Network	Not Announced
Puppy Channel	Not Announced
RadioTV Network	Mid-1999

Programming Service	Expected Launch Date
Real Estate Network	Not Announced
Seminar TV Network	Not Announced
Sewing and Needle Arts Network	Not Announced
Space Network	Not Announced
Spanish Shopping Network	4th Qtr 1998
Technology Channel	Not Announced
Television Games Network	Not Announced
Texas Cable News	January 1999
Theater Channel	Not Announced
Therapy Channel Network	Not Announced
Tri-State Media Network	3rd Qtr. 1999
URU TV/The Earthcast	Not Announced
Weatherscan	1998
WeB	Not Announced
World Cinema	4th Qtr 1998
Youth Sports Broadcasting Channel	Not Announced

Sources:
National Cable Television Assoc., *Planned Services*, Cable Television Developments, Spring 1998, at 126-142. Cablevision, *Database: Announced Services*, Sept. 21, 1998 at 49. Linda Moss, *DIY Slates $15M to Launch Digital Net*, Multichannel News, May 25, 1998 at 22. *New Network Handbook--Programming '98*, Cablevision, Mar. 16, 1998, at 41-53.

TABLE D-5
MSO Ownership in National Programming,
MSOs Ranked in Order of Number of Subscribers

Services	Subs. (Mil.)	TCI	Time Warner	Media One	Comcast	Cox	Cable-vision Systems	Jones Cable
Action Pay-Per-View	8.0	35%						
AMC	68.0						75%	
Animal Planet	40.7	49%				24.6%		
BBC America	*	24.6%				12.3%		
BET	54.2	35%						
BET on Jazz	3.5	35%						
BET Movies	3.5	81%						
The Box Worldwide	26.8	78%						
Bravo	35.0						75%	
Canales ñ	*	100%						
Cartoon Network	51.3		100%					
CBS Eye on People	11.0	24.6%				12.3%		
Cinemax	32.0		100%					
Cinemax2	(1)		100%					
CNN	73.7		100%					
CNNfn	2.4		100%					
CNN Headline News	68.6		100%					
CNN International	2.8		100%					
CNN/SI	.6		100%					

Services	Subs. (Mil.)	TCI	Time Warner	Media One	Comcast	Cox	Cable-vision Systems	Jones Cable
Comedy Central	51.1		50%					
Court TV	34.1	50%	50%					
Discovery Channel	73.7	49%				24.6%		
Discovery Civilization	*	49%				24.6%		
Discovery Health	*	49%				24.6%		
Discovery Home & Leisure	*	49%				24.6%		
Discovery Kids	*	49%				24.6%		
Discovery Science	*	49%				24.6%		
E!	50.0	10.4%		10.4%	39.6%			
Encore	10.0	100%						
Encore Love Stories	12.3	100%						
Encore Westerns	(2)	100%						
Encore Mysteries	(2)	100%						
Encore Action	(2)	100%						
Encore True Stories and Drama	(2)	100%						
Encore WAM!	(2)	100%						
FiT TV	11.2	50%						
Food Network	33.1		1%	5%		1%		

Services	Subs. (Mil.)	TCI	Time Warner	Media One	Comcast	Cox	Cable-vision Systems	Jones Cable
Fox Sports Americas	9.0	25%						
Fox Sports Direct	5.2	50%						
Fox Sports Net	57.0	25%					37.5%	
Fox Sports World	.4	50%						
FX	35.8	50%						
GEMS International Television	11.0					50%		
Golf Channel	17.3			14.4%	43.3%			
Great American Country	3.0							100%
HBO	(1)		100%					
HBO 2	(1)		100%					
HBO 3	(1)		100%					
HBO Family	(1)		100%					
Home Shopping Network	53.2	18.6%		<1%				
Home Shopping (Spree!)	12.4	18.6%		<1%				
Independent Film Channel	15.0						75%	
International Channel	8.0	90%						
Kaleidoscope	15.0	12%						

Services	Subs. (Mil.)	TCI	Time Warner	Media One	Comcast	Cox	Cable-vision Systems	Jones Cable
Knowledge TV	26.0							97%
MuchMusic	18.5						75%	
Odyssey	30.1	32.5%						
Outdoor Life	13.5	16.7%		8.3%	8.3%	33.3%		
Ovation	5.2		4.2%					
Prevue Channel	50.8	44%						
Product Information Network	8.0					45%		
QVC	66.6	43%			57%			
Romance Classics	14.0						75%	
Sci-Fi Channel	49.6	18.6%		<1%				
Sneak Preview	36.0	12%						
Speedvision	14.5	16.7%		8.3%	8.3%	33.3%		
Starz!	7.5	100%						
Starz!2	*	100%						
Style	*	10.4%		10.4%	39.6%			
TBS	74.4		100%					
Telemundo	17.6	50%						
TLC	65.1	49%				24.6%		
TNT	73.1		100%					

Services	Subs. (Mil.)	TCI	Time Warner	Media One	Comcast	Cox	Cable-vision Systems	Jones Cable
Travel Channel	18.4	49%				24.6%		
Turner Classic Movies	28.4		100%					
USA Network	73.7	18.6%		<1%				
Viewers Choice 1-10	19.0	10%	17%	10%	10%	20%		
Wingspan	*	49%				24.6%		

Notes:
In addition to cable, other services such as MMDS (wireless cable), SMATV (satellite master antenna television), satellite, including HSD (home satellite dish) and DBS (direct broadcast satellite), broadcast television and LPTV (low power television) may distribute these signals. Subscriber figures may include these noncable services.

* Indicates that subscribership count is unknown or not available.
(1) Subscribership of 32.0 million includes all Cinemax and HBO channels.
(2) Subscribership of 12.3 million includes all of Encore's six Thematic Multiplex channels.

Sources:
Sources for subscriber counts: Paul Kagan Assocs., Inc., *June 30 Network Census*, Cable Program Investor, Aug. 14, 1998, at 11. National Cable Television Assoc, *National Video Services*, Cable Television Developments, Spring 1998, at 28-97. *Liberty Media Assets as of 5/15/98*, at http://www.tci.com/libertymedia.com/liberty.pgs/libertyfinancial.html on Aug. 21, 1998. Sources for ownership percentages: See Table D-1 sources.

TABLE D-6
Top 50 Programming
Services by Subscribership

Rank	Programming Network (Top 50)	Number of Subscribers (Millions)	MSO Ownership Interest in Network (%)
1	TBS	74.4	Time Warner (100)
2	ESPN	73.8	None
3	Discovery Channel	73.7	TCI (49), Cox (24.6)
4	USA Network	73.7	TCI (18.6)
5	CNN	73.7	Time Warner (100)
6	C-SPAN	73.3	None
7	TNT	73.1	Time Warner (100)
8	Nickelodeon/Nick at Nite	72.6	None
9	Fox Family Channel	71.8	None
10	A&E	71.7	None
11	TNN (The Nashville Network)	71.5	None
12	Lifetime Television	71.5	None
13	Weather Channel	70.2	None
14	MTV	69.4	None
15	CNN Headline News	68.6	TIme Warner (100)
16	AMC	68.0	Cablevision (75)
17	QVC	66.6	Comcast (57), TCI (43)
18	CNBC	65.6	None
19	TLC (The Learning Channel)	65.1	TCI (49), Cox (24.6)
20	VH1	62.2	None
21	ESPN2	58.5	None
22	BET	54.2	TCI (35)

Rank	Programming Network (Top 50)	Number of Subscribers (Millions)	MSO Ownership Interest in Network (%)
23	Home Shopping Network	53.2	TCI (18.6)
24	Cartoon Network	51.3	Time Warner (100)
25	C-SPAN2	51.1	None
26	Comedy Central	51.1	Time Warner (50)
27	Prevue Channel	50.8	TCI (12)
28	E! Entertainment	50.0	Comcast (39.6), Media One (10.4), TCI (10.4)
29	Sci-Fi Channel	49.6	TCI (18.6)
30	History Channel	49.6	None
31	CMT (Country Music Television)	42.2	None
32	Disney Channel	41.9	None
33	MSNBC	41.0	None
34	Animal Planet	40.7	TCI (49), Cox (24.6)
35	Sneak Prevue	36.0	TCI (12)
36	FX	35.8	TCI (50)
37	Bravo	35.0	Cablevision (75)
38	Court TV	34.1	TCI (50), Time Warner (50)
39	Food Network	33.1	Media One (5), Cox (1), Time Warner (1)
40	Fox News Channel	32.0	None
41	Odyssey Channel	30.1	TCI (32.5)
42	Nick at Night's TV Land	29.1	None
43	Turner Classic Movies	28.4	Time Warner (100)
44	Box Worldwide	26.8	TCI (78)
45	Knowledge TV	26.0	Jones (97)
46	Travel Channel	18.4	TCI (49), Cox (24.6)

Rank	Programming Network (Top 50)	Number of Subscribers (Millions)	MSO Ownership Interest in Network (%)
47	Golf Channel	17.3	MediaOne (14.4)
48	ESPN Classic Sports	15.0	None
49	Independent Film Channel	15.0	Cablevision (75)
50	Game Show Network	14.5	None

Notes:
In addition to cable, other services such as MMDS (wireless cable), SMATV (satellite master antenna television), satellite, including HSD (home satellite dish) and DBS (direct broadcast satellite), broadcast television and LPTV (low power television) may distribute these signals. Subscriber figures may include these noncable services.

Superstations included in the source data are not included in this ranking.

Source:
Paul Kagan Assocs., Inc., *June 30 Network Census*, Cable Program Investor, Aug. 14, 1998, at 11.

TABLE D-7
Top 15 Programming Services
by Prime Time Rating

Rank	Programming Service	MSO with Ownership Interest (%)
1	TNT	Time Warner (100)
2	USA Network	TCI (18.6)
3	Nickelodeon/Nick at Nite	None
4	TBS	Time Warner (100)
5	Lifetime Television	None
6	Cartoon Network	Time Warner (100)
7	ESPN	None
8	Fox Family Channel	None
9	A&E	None
10	Discovery Channel	TCI (49), Cox (24.6)
11	TNN (The Nashville Network)	None
12	TLC (The Learning Channel)	TCI (49), Cox (24.6)
13	CNN	Time Warner (100)
14	FX	TCI (50)
15	Comedy Central	Time Warner (50)

Notes:
Superstations included in the source data are not included in this ranking.

Source:
Paul Kagan Assocs., Inc., *Second Quarter 1998 Prime-Time Ratings*, Cable Program Investor, Aug. 14, 1998, at 6.

APPENDIX E

Program Access Matters Resolved

1. In a program access complaint dismissed in 1998, EchoStar Communications Corporation ("EchoStar") alleged that Rainbow Media Holdings, Inc. and Rainbow Programming Holdings, Inc. (collectively "Rainbow") discriminated in the prices, terms and conditions of programming offered to EchoStar, unreasonably refused to sell its programming to EchoStar, and engaged in unfair methods of competition or unfair acts and practices. EchoStar subsequently requested that the program access complaint be dismissed with prejudice, indicating that it and Rainbow amicably settled the issues in its complaint. Accordingly, the Cable Services Bureau ("Bureau") dismissed the proceeding with prejudice.

2. In a program access complaint decided in 1998, EchoStar alleged that FX Networks, LLC ("FX") and Fox/Liberty Networks, LLC ("Fox/Liberty") refused to provide its programming to EchoStar because of prohibited exclusive contracts that FX had with cable operators across the country. EchoStar alleged that FX's refusal to deal with EchoStar regarding such programming violated the Commission's prohibition on exclusive contracts, and constituted an unreasonable refusal to sell in violation of Section 628(c) of the Communications Act and Section 76.1002(b) of the Commission's rules[1] and an unfair practice in violation of Section 628(b) of the Act and Section 76.1001 of the Commission's rules.[2] In response, FX argued that its exclusive contracts were lawful when entered into because FX was not a vertically integrated programmer at the time, and that its subsequent vertical integration did not negate the validity of these agreements. The Bureau found that FX unreasonably refused to sell its programming to Echostar in violation of Section 628(c) of the Communications Act and Section 76.1002(b) of the Commission's rules. In granting the complaint, the Bureau stated that FX's once valid exclusive contracts did not in themselves justify its refusal to sell to Echostar.

3. In a similar program access matter, Corporate Media Partners, d/b/a Americast ("Americast"), and its telephone company partners, Ameritech Media Ventures, Inc., BellSouth Interactive Media Services, Inc., GTE Media Ventures Incorporated, and SNET Personal Vision, Inc., filed a complaint against FX, Fox/Liberty and Tele-Communications, Inc. ("TCI"). As with the Echostar complaint described above, Ameritech alleged that FX had refused to provide its programming to EchoStar because of prohibited exclusive contracts that FX had with cable operators across the country. FX acknowledged that the facts and circumstances surrounding Americast's complaint were materially indistinguishable from those examined by the Commission in the EchoStar proceeding, and offered no additional legal justification for its conduct. Consistent with the EchoStar proceeding, the Bureau found that FX unreasonably refused to sell its programming to Americast in violation of Section 628(c) of the Communications Act and Section 76.1002(b) of the Commission's rules.[3]

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[1]Communications Act §628(c), 47 U.S.C. § 548(c); 47 C.F.R. § 76.1002(b).

[2]Communications Act §628(b), 47 U.S.C. § 548(b); 47 C.F.R. § 76.1001.

[3]Subsequent to the Bureau's decision in this matter, TCI filed a letter stating that it had notified Americast, prior to the Bureau's decision, that it would not claim the benefit of, and would not seek to enforce, any exclusivity arrangement it had regarding the FX programming service that would prevent FX from authorizing the carriage of its programming by Americast. Accordingly, the Bureau issued a clarification reflecting the information submitted by TCI.

4. Outdoor Life Network, L.L.C. ("Outdoor Life") and Speedvision Network, L.L.C. ("Speedvision"), two cable programming vendors (collectively, "the Networks"), filed a Petition for Exclusivity seeking approval to enter into exclusive distribution agreements with MVPDs in 17 Nielsen Designated Market Areas and in the State of Connecticut. Section 628(c)(2)(D) of the Communications Act provides that, in areas served by a cable operator, exclusive contracts for satellite cable programming between vertically integrated programming vendors and cable operators are prohibited unless the Commission determines that such exclusivity is in the public interest.[4] The Bureau denied the Petition on the grounds that the exclusive arrangement proposed by the Networks was not in the public interest. The Bureau stated that the proposed exclusivity would withhold programming services with nationwide appeal from emerging competitors to cable, such as cable overbuilders, MMDS, and telephone companies, thereby directly constraining competition in the local distribution markets at issue as well as the national distribution market. The Bureau also found that no countervailing public interest benefits would be derived from allowing enforcement of the proposed exclusivity.

5. Turner Vision, Inc., Satellite Receivers Ltd., Consumer Satellite Systems, Inc. and Programmers Clearing House, Inc. ("Complainants") alleged in a program access complaint that CNN had engaged in price discrimination and unfair practices because CNN charged substantially lower rates for Cable News Network and Headline News to Complainants' competitors than it charged to Complainants. CNN filed a consolidated answer requesting dismissal, stating that its price differentials were justified and that Complainants did not demonstrate price discrimination between themselves and similarly situated MVPDs. The Bureau found that although CNN justified a significant portion of the price differential, it had engaged in unlawful price discrimination and violated Section 628(c) of the Communications Act and Section 76.1002(b) of the Commission's rules for failure to justify the entire amount of the disputed price differential.

6. Ameritech alleged in a program access complaint that MediaOne, Inc. ("MediaOne") and Time Warner Cable ("Time Warner") violated Section 628(b) of the Communications Act and Section 76.1001 of the Commission's rules by entering into exclusivity agreements whereby Time Warner and MediaOne would obtain exclusive rights to carry Classic Sports Network in various communities located in Illinois and Michigan. Subsequently, Ameritech filed Joint Stipulations of Dismissal with both Time Warner and MediaOne, stating that the issues raised by Ameritech's complaint relating to the affected communities had been resolved. In terminating this proceeding, the Bureau noted that it encourages resolution of program access disputes through negotiations between the parties in an effort to avoid time-consuming, complex adjudication.

7. DIRECTV filed a program access complaint against Comcast Corporation ("Comcast"), Comcast-Spectacor, L.P., and Comcast SportsNet ("SportsNet") (collectively referred to as "Defendants"). Comcast delivers SportsNet programming terrestrially, and had denied DIRECTV access to that programming. The three interrelated matters disputed in this proceeding were as follows; (1) is the programming in question "satellite cable programming" so that Comcast's conduct is actionable under Section 628(c) of the program access rules, (2) does the Commission have the authority to take action against evasions of the program access rules and, if so, is Comcast's conduct actionable as an evasion, and (3) does Comcast's conduct involve unfair or anti-competitive action to deprive DIRECTV of "satellite cable programming" under Section 628(b)? In denying DIRECTV's complaint, the Bureau found that the correct reading of Section 628(c) is that the provisions in question apply to satellite cable programming, not programming that was "previously" satellite-delivered or the "equivalent" of satellite cable programming. In addition, the Bureau did not find evidence that

[4]Communications Act § 628(c)(2)(D), 47 U.S.C. § 548(c)(2)(D).

Defendants intended to evade the rules or that, standing alone, Comcast's decision to deliver Comcast SportsNet terrestrially and to deny that programming to DIRECTV was "unfair" under Section 628(b).

8. EchoStar filed a program access complaint against Fox/Liberty Networks LLC, Fox Sports Net LLC and Fox Sports Direct (collectively "Fox"). EchoStar alleges that Fox had engaged in unlawful discrimination against EchoStar in the prices, terms and conditions that Fox imposed upon EchoStar for making available the regional sports programming that it controls. Fox filed an answer denying discrimination and requesting that the Commission dismiss the Complaint with prejudice. Pursuant to Section 76.1003(r)(1) of the Commission's rules, Echostar had one year from the date of entering into the contract with Liberty Satellite Sports, Inc./Fox Sports Direct to file a program access complaint with the Commission. The Bureau dismissed Echostar's complaint with prejudice, finding that it was barred by the one year limitations period.

APPENDIX F

INQUIRY CONCERNING CABLE TELEVISION PROGRAMMING COSTS

Report of the Cable Services Bureau

I. Introduction and Summary of Findings

1. In an effort to identify the sources of recent cable television programming cost increases, the Cable Services Bureau ("the Bureau") commenced an inquiry designed to shed light on discrete subcategories of programming costs, as well as on other matters related to cable operators' costs and revenues ("the Inquiry"). The Inquiry was prompted by the Commission's 1997 Annual Report on Video Competition ("Competition Report")[1] and its 1997 Report on Cable Industry Prices ("Price Survey").[2] The Price Survey indicated that monthly subscriber rates charged by noncompetitive cable systems increased, on average, by 8.5% during the year ended July 1, 1997, following increases of approximately 8.8% during the previous year.[3] These increases come at a time when general inflation, as measured by the Consumer Price Index ("CPI"), is relatively mild. The CPI rose by 2.23% and 2.95%, respectively, during the two-year period under review.[4] A chart comparing the trend of the general CPI since 1990 with the trend of the Cable CPI for the same period is attached as Chart 1. More recently, cable rates continue to rise approximately four times the rate of inflation. According to the Bureau of Labor Statistics, between June 1997 and June 1998, cable rates rose 7.3%, considerably more than the 1.7% increase in the CPI during the same period.[5]

2. The Inquiry generally confirmed the Price Survey findings regarding the relative effect on cable rates of programming costs, channel additions, and infrastructure upgrades under Commission rules.[6] Programming costs include license fees, retransmission consent and copyright fees, and markups associated

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[1] *Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, CS Dkt. No. 97-141, Fourth Annual Report *("Competition Report"*), 13 FCC Rcd 1034 (1998).

[2] *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, 12 FCC Rcd at 22756, 22765 (1997) ("*Price Survey Report*").

[3] *Id.* On a per-channel basis, however, the increase in rates was closer to the general rate of inflation. On a per-channel basis, average monthly rates increased by 1.7% and 3.3%, respectively, for the years ending July 1, 1996 and July 1, 1997.

[4] We do not mean to suggest that the CPI is the appropriate measure of the reasonableness of cable rates, especially during a period of considerable investment in cable plant and programming.

[5] The per-channel rate increase for the year ending July 1, 1998 is not yet available.

[6] 47 CFR § 76.922 (f), (g), and (j).

with programming cost increases; all of which are recoverable by cable operators under Commission rules.[7] With respect to channel additions, Commission rules prior to December 31, 1997 provided an incentive to operators to increase their program offerings by permitting operators to increase rates by either of two methods.[8] Infrastructure upgrade costs may be recovered through cost-of-service filings or, with respect to two of the MSOs participating in the Inquiry, pursuant to social contracts those MSOs have executed.[9] The Price Survey found that, after the allowed inflation adjustments, programming costs were the most significant factor contributing to reported rate increases. These results are shown in Chart 2. Although much attention has been focused on increases in the cost of sports programming, the Inquiry found that during the two-year period under review only a relatively minor portion of rate increases (5.3%) can be attributed to sports programming increases.[10] Chart 3 illustrates the degree to which certain subcategories of programming costs contributed to rate increases.

3. For the Multiple System Operators ("MSOs") responding to the Inquiry,[11] the rate of increase in programming costs was significant during the two-year period under review. Between July 1, 1996 and July 1, 1997, the responding MSOs increased their average expenditures for programming by 20.2%. That increase in programming costs reflects both the increases in the cost of existing programming (i.e., the programming that was offered on July 1, 1996) as well as the full cost of new programming services the operator may have added during the ensuing year. Some portion of the increase in programming expenditures is also attributable to changes in the mix of programming offered since operators frequently change their programming lineup, and to subscriber growth since programming costs are usually established on a per-subscriber basis. Programming costs for the responding MSOs (for regulated services) were equal to approximately 24% of regulated revenues for the 12-month period ending July 1, 1997. Thus, on average, about one-quarter of an operator's regulated revenues goes to pay for programming.

4. The Inquiry also sought information on revenues, including advertising revenues. Advertising revenues for the MSOs responding to the Inquiry grew steadily during the period under review. The Inquiry results indicate that advertising revenues increased by nearly 29% in the 12-month period ending July 1, 1997,

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[7]47 CFR §§ 76.901 and 76.922(f). Section 76.922(f) authorizes cable operators to recover a 7.5% markup on increases in existing programming costs and on the full programming costs associated with new channels of programming. The 7.5% markup on new channels of programming is only available, however, if the operator does not use the Operators' Cap method of cost recovery for new channels. *See* 47 CFR § 76.922 (g).

[8]47 CFR § 76.922(f) and (g). *See also* ¶ 25. The two methodologies allowed operators to choose either a per-channel adjustment factor (§ 76.922(g)(2)) or an operators cap adjustment (§ 76.922(g)(3)). Both methodologies expired on December 31, 1997. Currently, Commission rules (§ 76.922(f)) authorize an operator to recover programming costs (plus 7.5%) with no additional adjustments.

[9]47 CFR § 76.922(j). *See also, Social Contract for Time Warner*, 11 FCC Rcd 2788 (1995), *appeal pending sub nom. Intercommunity Cable Regulatory Comm'n v. FCC*, No. 96-1027 (D.C. Cir., filed Jan. 29, 1996) (motion to hold in abeyance granted by order dated June 12, 1996); *Social Contract for Continental Cablevision*, 11 FCC Rcd 299 (1995); *Continental Cablevision, Inc., Amended Social Contract*, 11 FCC Rcd 11118 (1996); *Social Contract for Comcast Cable Communications, Inc.*, 13 FCC Rcd 3612 (1997).

[10]*See* ¶ 23.

[11]Six MSOs participated in the Inquiry. However, not all provided information on every question.

and that advertising revenue equaled about 8% of regulated revenues at the end of this period.[12] Several Inquiry participants noted that some portion of this growth was attributable to factors such as system upgrades, additional channels, subscriber growth, clustering, and system acquisitions. The average advertising revenue earned by Inquiry participants in 1996 and 1997 is shown in Chart 4.

5. The Cable Television Consumer Protection and Competition Act of 1992 ("the 1992 Cable Act")[13] required the Commission to ensure that rates were reasonable[14] and "that cable operators continue to expand, where economically justified, their capacity and the programs offered over their cable systems."[15] In the first two years after the Act -- 1993 and 1994 -- the Commission successfully sought to check the rapid increases in cable rates that were occurring prior to passage of the Act, as evidenced from the downward trend of cable rates for those two years shown in Chart 1. For the period from 1995 through 1997, the Commission adopted rules, related to channel additions, designed to provide an incentive to cable operators to expand the capacities of their systems and increase their programming services. During this period, operators completed system upgrades and expanded their program offerings.[16] The cost of this expansion was significant, resulting in increases consistently several times higher than inflation. This incentive for expansion of services appears to have significantly contributed to the rate increases that took place during the period under study. The channel addition rules expired at the end of 1997 and are no longer available.[17] The 1996 Act eliminates most rate regulation of cable operators after March 1999.

6. While the 1992 Cable Act was intended both to restrain rates and stimulate growth, it is competition that most effectively will ensure both reasonable rates and improved services.[18] Competition has

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[12]Other sources of non-subscriber revenues -- in particular, sales commissions -- represented only 1% of regulated revenues.

[13]Cable Television Consumer Protection and Competition Act § 3, Pub. L. No. 102-385, 106 Stat. 1460 (1992), *codified at* Communications Act of 1934 ("Communications Act").

[14]Communications Act § 623(b)-(c), 47 U.S.C. § 543(b)-(c).

[15]1992 Cable Act § 2(b)(3), 106 Stat. 1463 (not codified).

[16]*See* Paul Kagan Assoc., Inc., *Cable TV Programming*, Aug. 31, 1997, at 1. By 1997, for example, approximately 40% of all subscribers were served by systems that had been upgraded to 750 MHz, and channel capacity on the average system had increased to 53. *See also* National Cable Television Association ("NCTA"), *Cable Television Developments*, Spring 1998, at 6. The number of cable programming networks also grew over this period, increasing from 139 in 1995 to 171 in 1998. Systems with 750 MHz of capacity currently are regarded as advanced systems. They can offer 116 6-MHz analog channels and typically include fiber-to-the-node architecture and other features designed to improve reliability and signal quality. By 1998, it is estimated that 57% of cable subscribers will be served by systems that are upgraded to 750 MHz, and average channel capacity is projected to increase to 61 channels. Paul Kagan Associates notes that the larger cable systems serve most cable subscribers, and that these systems offer, on average, many more channels than smaller systems offer. Thus, on a subscriber weighted basis, average channel capacity would be higher.

[17]47 C.F.R. § 76.922(g).

[18]The *Price Survey Report* found, for example, that in areas where there was competition between wireline

(continued...)

been and continues to be very slow in coming to the video distribution industry. As of June 1997, the cable industry still controlled 87% of subscribers to multichannel video programming distributors ("MVPDs") and, for most of these subscribers, there is no product which substitutes directly for cable wireline MVPD service.[19] Cable television continues to be the primary delivery technology for the distribution of multichannel video programming and continues to occupy a dominant position in the MVPD marketplace. Subscribers served by cable wireline MVPD service rarely have a choice of wireline providers.[20] The Commission has taken a series of steps to foster increased competition in the cable industry. It has adopted mechanisms to improve the effectiveness of our program access rules.[21] It has preempted local rules and regulations which prohibited or unnecessarily restricted the ability of

(...continued)
MVPDs, rates were lower than in areas where the incumbent cable operator faced no competition, whether or not the incumbent was regulated. The Price Survey found that average monthly rates for those systems that faced competition was $25.62 as of July 1, 1997, compared with an average monthly rate of $28.83 for noncompetitive systems. Thus, the presence of a rival system constrains rates below regulated levels. The Price Survey did find, however, that non-competitive operators offered more channels (49.4) on average than operators facing direct wireline competition (47.3). It therefore appears that rate regulation was successful in promoting upgrades of facilities and the expansion of services. *Price Survey Report*, 12 FCC Rcd at 22765, 22779.

[19]*See Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming,* CS Docket No. 97-141, Fourth Annual Report *("Competition Report")*, 13 FCC Rcd 1034 (1998). While most U.S. households are able to choose from the various Direct Broadcast Satellite ("DBS") services as an alternative to cable, certain aspects of DBS service, such as higher installation and equipment costs, higher costs for multiple-set households, and the inability to deliver local broadcast signals, prevent it from being a direct substitute for cable services for many consumers. For a discussion of this issue, *see Competition Report*, 13 FCC Rcd 1071-74 ¶ ¶ 56-60.

[20]*Price Survey Report,* 12 FCC Rcd at 22759.

[21]*See Petition for Rulemaking of Ameritech New Media, Inc. Regarding Development of Competition and Diversity in Video Programming Distribution and Carriage*, CS Docket No. 97-248, Report and Order, 13 FCC Rcd 15822 (1998).

homeowners to install satellite dishes or other antennae on their property.[22] It has given alternative video distributors access to wiring installed by cable operators in multiple dwelling units ("MDUs").[23] However, the Commission's statutory authority does not extend to certain additional areas which potentially could foster additional competition. For example, satellite providers are effectively prohibited from carrying local network broadcast signals under the Satellite Home Viewer Act.[24] Also, there are limits on our authority to mandate access to programming when the programming in question is delivered terrestrially rather than by satellite.[25] Finally, the Commission's impact on competition in MDUs is limited because the Commission's inside wiring regulations extend only to circumstances where the incumbent video services provider no longer has a legal right to remain in the building. The measures the Commission has taken have helped to promote competition, but competition remains the exception, not the rule.

II. Methodology of the Inquiry

7. To conduct the Inquiry, the Bureau prepared a questionnaire and distributed it to the six largest (in terms of subscriber size) cable television industry MSOs. Participation in the Inquiry was voluntary. The Bureau sought to build on information that was gathered in the Price Survey. The questionnaire was designed to assist the Bureau in examining certain specific operator costs, in particular their expenditures for programming services, the effects of system upgrades on rates, and operators' major sources of non-subscriber revenues. The six MSOs selected for participation were: Cablevision Systems Corporation; Comcast Corporation; Cox Communications, Inc.; MediaOne, Inc; TCI Communications, Inc.; and Time Warner Cable. Collectively, these six MSOs serve approximately 67% of all cable subscribers. While all six MSOs responded

[22]The Commission recently modified these rules to permit viewers who rent property to install and use antennas where they have exclusive use (e.g., balconies or patios). The rules had applied previously only to viewers who owned property. *See In the Matter of Preemption of Local Zoning Regulation of Satellite Earth Stations* (IB Docket No. 95-59), *In the Matter of Implementation of Section 207 of the Telecommunications Act of 1996* (CS Docket No. 96-83)*: Restrictions on Over-the-Air Reception Devices Television Broadcast Service and Multichannel Multipoint Distribution Service*, Report and Order, Memorandum Opinion and Order, and Further Notice of Proposed Rulemaking, 11 FCC Rcd 19276 (1996); *In the Matter of Implementation of Section 207 of the Telecommunications Act of 1996: Restrictions on Over-the-Air Reception Devices Television Broadcast Service and Multichannel Multipoint Distribution Service*, CS Docket No. 96-83, Order on Reconsideration, 13 FCC Rcd 18962 (1998); *and In the Matter of Implementation of Section 207 of the Telecommunications Act of 1996: Restrictions on Over-the-Air Reception Devices Television Broadcast Service and Multichannel Multipoint Distribution Service*, CS Docket No. 96-83, Second Report and Order, FCC 98-273 (rel. Nov. 20, 1998).

[23]*See In the Matter of Telecommunications Services, Inside Wiring and Customer Premises Equipment* (CS Docket No. 95-184), *In the Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992* (MM Docket No. 92-260): *Cable Home Wiring*, Report and Order and Second Further Notice of Proposed Rulemaking, 13 FCC Rcd 3659 (1997).

[24]17 U.S.C. § 119. The Commission has issued a Notice of Proposed Rulemaking in response to two petitions concerning the Satellite Home Viewer Act. *See In the Matter of Network Signals to Unserved Households for Purposes of the Satellite Home Viewer Act - Part 73 Definition and Measurement of Signals of Grade B Intensity*, CS Docket No. 98-201, Notice of Proposed Rulemaking, FCC 98-302 (rel. Nov. 17, 1998).

[25]*See, e.g., In the Matter of DIRECTV, Inc., Complainant, v. COMCAST Corporation, COMCAST-SPECTACOR, L.P.,COMCAST SPORTSNET, Defendants*, CSR 5112-P, Memorandum Opinion and Order, DA 98-2151 (rel. Oct. 27, 1998).

to varying degrees, not all respondents provided complete information on every question. The participants provided several reasons for not responding fully. These include the unavailability of the requested data, the inability of the MSO to compile the data in the requested format, and/or the MSO's unwillingness to share the requested data because of its proprietary or commercially sensitive nature. At least four respondents, however, provided consistent information across a majority of questions. The results of the Inquiry, therefore, are based largely on four responses. For those questions where more than four MSOs provided consistent data, the results are footnoted.

8. The Bureau also received an unsolicited letter from Summit Communications ("Summit"), a small operator that serves 42,000 subscribers from 25 headends in the Pacific Northwest.[26] Summit offers its views on programming costs and advertising revenues.

9. The questionnaire asked the MSOs to provide information as of a particular date on an average or aggregate basis for all of their systems, whether or not the systems were regulated by the Commission or by a local franchising authority, or were unregulated.[27] The dates selected for the questionnaire (July 1, 1996, and July 1, 1997) correspond with the dates used in the 1997 Price Survey. The results, which are shown in Tables 1 and 2, are based on averages of the data provided by four MSOs. Each table, however, is based on a different set of four respondents. Where there were fewer than four responses to a particular question or part of a question, averages were not calculated or reported, with the exception of data on channel additions which are based on three responses. Some MSOs provided data in answer to certain questions (such as those pertaining to average rates) for sampled systems only, rather than all systems. Those MSOs used the same sample set as the sample selected by the Commission for the Price Survey. Unlike the Price Survey, however, the Inquiry is not based on a random sample. The results, therefore, should not be interpreted as being representative of the entire industry. A further shortcoming of the data from a statistical standpoint is that the mix of respondents is not the same in Tables 1 and 2 so that comparisons between the two tables cannot be made.

10. The focus of the Inquiry and of this Report is primarily on programming costs. Several additional areas, however, were included in the Inquiry questionnaire and are considered in this Report, including other factors contributing to rate increases, the effects of affiliation between programmers and operators on programming costs, and the sources and trends of certain categories of operators' revenues and expenditures.

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[26]Letter dated June 2, 1998, from James A. Hirshfield, Jr., to Office of the Secretary, Federal Communications Commission.

[27]Several categories of cable systems are not subject to rate regulation. Cable operators serving communities that have not become certified to regulate rates are not regulated at the BST level. Operators are not regulated at the CPST level unless a valid complaint is filed with the Commission. Cable systems that face effective competition, as that term is defined by statute and the Commission's regulations, are exempt from BST and CPST rate regulation. (Communications Act § 623(l)(1), 47 U.S.CC. § 543(l)(1); 47 C.F.R. §§ 76.905(a), 76.1401.) LFAs may not become certified to regulate rates if the operator serving their community is subject to effective competition, and LFAs' certification to regulate is revocable upon a showing that the cable operator has become subject to effective competition. (47 C.F.R. §§ 76.911, 76.914, 76.915.) The Commission, likewise, is not permitted to regulate the CPST rates of systems that are subject to effective competition. (47 C.F.R. § 76.915(c).) Small cable operators serving 50,000 or fewer subscribers in a franchise area are exempt from CPST rate regulation, regardless of whether they are subject to effective competition. (47 C.F.R. § 76.1403.)

11. In the Price Survey, the Commission identified the main factors that contributed to changes in cable rates between July 1, 1995 and July 1, 1997. The Price Survey indicated that for the noncompetitive segment of the cable industry, which accounts for the bulk of the industry,[28] 34% of total permitted rate increases during the 12-month period ending July 1, 1997, were attributable to inflation adjustments; 29% of total rate increases were attributable to programming cost increases; 13% were attributable to channel additions; 11% to system upgrades; 8% to higher equipment costs; and 5% to "other" cost increases. Chart 2 provides a graphic display of this breakdown. Through the Inquiry, the Bureau sought additional detailed information on three of these factors: programming costs, channel additions, and system upgrades. The Bureau also sought information on expenditures for programming services with affiliated versus unaffiliated programmers, and information on non-subscriber revenues. The major findings of the Inquiry are summarized below.

III. Findings

12. The results of the Inquiry tracked the findings of the Price Survey Report for those aggregate measures where the two surveys overlapped. For example, the 1997 Price Survey found that, on average, the noncompetitive group of cable operators charged $28.83 per month for programming services (BST and CPST) and equipment as of July 1, 1997.[29] As shown in Table 2, the Inquiry participants (based on four responses) charged $28.62, on average, for the same services as of the same date. [30]

A. Programming costs

13. The Commission's rules allow operators to pass through new programming costs, which are defined as "external costs," since operators have little or no control over these costs.[31] When the Commission adopted its rate regulations, it noted that programming costs had increased at a rate "far exceeding the rate of inflation."[32] Acknowledging that the pass-through of new programming costs could have adverse effects on subscriber rates, the Commission concluded that excessive rate increases due to programming cost increases could cause operators to lose subscribers and that this threat would temper the level of programming-induced

[28]The 1997 Price Survey found that as of July 1997, approximately 2.0 million cable subscribers, or 3.2% of all subscribers served, received service from a cable operator that faces effective competition. The remaining 59.7 million subscribers, or 96.8% of all cable subscribers, were served by cable operators that do not face effective competition, i.e., the noncompetitive segment of the industry. Within this group, 34.9 million subscribers (58.5%) received service from regulated systems, and 24.8 million (41.5%) received service from unregulated systems. (*See Price Survey Report*, 12 FCC Rcd at 22759 & n.14. Total subscribership as of October 1996 was 61.7 million. *Id.* at 22759 n.12.)

[29]*Price Survey Report*, 12 FCC Rcd at 22765.

[30]For all six MSOs, the average rate was $28.32.

[31]47 CFR § 76.922(f).

[32]*Rate Order*, 8 FCC Rcd at 5787.

rate increases.[33] The Commission added that it would monitor the impact of external cost treatment of programming costs.[34]

14. Special rules govern an operator's recovery of the costs of programming purchased from entities that are affiliated with the operator. An operator may adjust its rates to reflect increases in the costs of such programming only to the extent that the license fees charged to the operator by the affiliated programmer reflect either (1) the prevailing company prices offered by the programmer to unaffiliated entities or (2) the fair market value of the programming.[35]

1. Recent trends in cable operators' expenditures for programming services

15. The Inquiry found that, in 1996, the four MSOs responding to this question incurred an average of $397.8 million in aggregate expenditures for regulated programming. This category of expenditures increased by 20.2% in 1997, rising to $478.1 million. The 20.2% increase between 1996 and 1997 includes both cost increases incurred on existing programming services offered in 1996, as well as the cost of programming services the operators added during the year.[36] Inquiry participants reported that subscriber growth,[37] system acquisitions, and changes in the mix of programming offered (for example, moving a premium service to the basic tier), also contributed to the reported increases in aggregate programming expenditures. Had the increase in programming costs been reported on a per-channel, per-subscriber basis, it would have been significantly less than the aggregate expenditure increase of 20.2%.[38] Programming expenditures as a percent of average regulated revenues were calculated using the responses from the same four MSOs who provided information on both programming expenditures and regulated revenues. For those four MSOs, programming expenditures as a percent of average regulated revenues equaled 22.4% in 1996 and 23.6% in 1997.

16. The same four MSOs also reported their expenditures for each major subcategory of programming -- sports, news, children's programming, and general entertainment programming (referred to in

[33] *Id.* at 5787-88. This observation recognizes the effects of price elasticity of demand.

[34] *Id.*

[35] 47 C.F.R. § 76.922(f)(6).

[36] The questionnaire did not produce data permitting a breakdown between the costs of existing programming and programming associated with newly-added channels.

[37] License fees, according to publicly available information, typically are established on a per-subscriber, per-month basis.

[38] Due to incomplete data, the increase in programming costs on a per-channel, per-subscriber basis could not be calculated from the Inquiry responses. However, we know that both the number of channels offered and the number of subscribers increased between 1996 and 1997. Industry-wide subscribership increased by 2.2% and the number of channels offered on regulated tiers grew by 5.1% for this period. *Price Survey Report*, 12 FCC Rcd. at 22765.

the questionnaire as "all other").[39] The average aggregate expenditures for each subcategory of programming are shown in Table 1. On average, sports programming accounted for 26.7% of total expenditures for regulated programming in 1997 (or $127.6 million); news programming accounted for 11.2% (or $53.3 million) of the total; children's programming accounted for 11.5% (or $55.1 million); and the "all other" category accounted for 50.6% (or $242.1 million) of total programming expenditures. As shown in Table 1, average aggregate expenditures for the four subcategories of programming -- sports, news, children's, and "all other" increased by 16.3%, 25.8%, 24.6% and 19.9%, respectively, between 1996 and 1997. The results show, therefore, that between 1996 and 1997 sports programming had the lowest rate of increase in aggregate expenditures of the four subcategories of programming.

17. One MSO pointed out that although "sports programming costs get the headlines, huge increases in expenditures by cable programming networks are the rule."[40] The MSO states that cable programming network expenditures to produce basic cable programming increased eight-fold, from $482 million to $4 billion, from 1986 to 1998.[41]

18. Summit states that small operators lack the market power to negotiate favorable programming rates and cannot obtain volume discounts. Summit alleges that some programmers refuse to negotiate with the National Cable Television Cooperative, which purchases programming on behalf of its small-operator members. As a result, according to Summit, small operators have little control over their programming costs.

2. Programming costs as a factor contributing to recent rate increases

19. In their public statements, operators have identified programming costs, and the costs of sports programming in particular, as one of the major reasons for recent rate increases. In addition, at least one industry study has concluded that sports and entertainment programming costs have escalated subsequent to the period under review at a rate that far exceeds the general rate of inflation.[42] In the case of sports programming, news accounts within the past year of bidding wars and unprecedented fees for sports broadcast rights lend credence to the proposition that sports programming costs are indeed escalating rapidly.[43] These more recent cost increases are not reflected in the Inquiry responses.

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[39]For purposes of this report, the term "general entertainment programming" means all programming except sports, news, and children's programming.

[40]The MSO cites "Basic Nets: Quality Costs Money," *Multichannel News*, June 8, 1998, pp. 3, 18.

[41]*Id.*

[42]Kagan Media Appraisals, Inc., *TV Programming Costs: An Analysis of the Market Forces Driving Entertainment and Sports Rights Fees* (Dec. 1997) ("Kagan Study"). The Kagan Study attributes this trend to increases in sports player salaries, the distribution fees charged by sports leagues and team owners, entertainment production costs, and licensing fees for movies and off-network syndicated programming.

[43]*See, e.g.*, Michael Hiestand, "The NFL's $17.6 Billion Payday; Broadcasters See Football as Necessary to Survival," USA TODAY, Jan. 14, 1998, at 1A; Leslie Cauley, "ESPN's New Football Deal Is Expected To Boost Rates for Cable TV Next Year," WALL ST. J., Jan. 16, 1998, at B6.

20. The Inquiry results, therefore, do not reflect any license fee increases owing to sports distribution rights agreements announced in late 1997 and 1998.[44] In response to a question on this issue, a majority of the participating MSOs anticipated an increase in their sports programming costs in the coming year. Press reports indicate that ESPN has already increased its license fees for some operators by up to 20%.[45] The Inquiry participants profess that their ability to "pass-through" these increased costs will depend on the willingness of subscribers to pay the resulting higher charges.

21. The Price Survey found that cable operators in the noncompetitive group attributed 29% of their rate increases during the year ending July 1, 1997, to aggregate programming cost increases. The Inquiry found that four large MSOs, on average, attributed 28.2% of their rate increases over the same period to aggregate programming cost increases.[46]

22. The Inquiry participants attributed virtually all of their programming expenditure increases (97.1% in 1997) to increases in the license fees charged by cable programming networks. The remaining 2.9% was attributed primarily to allowable markups on programming costs.[47] We asked Inquiry participants to provide a breakdown of their expenditures on license fees into the four programming subcategories -- sports, children's, news, and "all other" -- and, in addition, to allocate the amount of their increase in average monthly rates that was attributable to each of these four subcategories. Four MSOs provided this breakdown.[48] These MSOs experienced a $2.45 change in their monthly rates for the year ending July 1, 1997.[49] Of this amount, the MSOs attributed $0.69 or 28.2% to increases in programming costs. Of this $0.69, they attributed $0.67 to changes in license fees, and, of that amount, $0.13 (or 19.4%), $0.08 (or 11.9%), $0.03 (or 4.5%), and

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[44]For example, ESPN bid $4.8 billion -- $600 million per year for eight years -- for its Sunday night National Football League ("NFL") package beginning in 1998, which is more than twice as much as the preceding package. *See* Leslie Cauley, "ESPN's New Football Deal Is Expected To Boost Rates for Cable TV Next Year," WALL ST. J., Jan. 16, 1998, at B6. CBS outbid NBC for the National Football Conference package, paying $4.1 billion over eight years, which is 130% more than the prior contract. *See* Michael Hiestand, "The NFL's $17.6 Billion Payday; Broadcasters See Football as Necessary to Survival," USA TODAY, Jan. 14, 1998, at 1A. The NFL deals followed huge increases in National Basketball Association broadcasting rights, for which NBC bid $1.75 billion over four years, which is an increase of more than 130%. *Id.* Finally, ESPN recently agreed to pay $600 million for National Hockey League ("NHL") broadcast rights over a five-year period starting with the 1999-2000 season (with ABC to pay $250 million of that amount), more than double the previous rate. *See* COMM. DAILY, Aug. 26, 1998; R. Thomas Umstead, "Disney NHL Bid Worries Ops," MULTICHANNEL NEWS, Aug. 10, 1998.

[45]*See, e.g.*, Leslie Cauley, "Big Cable-TV Operators Are up in Arms Over ESPN Move To Raise Rates Sharply," WALL ST. J., April 15, 1998, at B6; Leslie Cauley, "Cable Firms Consider Removing ESPN From Basic Tier, Passing Costs to Fans," WALL ST. J., May 4, 1998, at B6.

[46]For all six MSOs, the portion of the change in average monthly rates attributed to programming cost increases was 28.8%.

[47]Programming costs include license fees, retransmission consent and copyright fees, and markups on programming permitted under the Commission's rules. License fees account for the bulk of programming costs (98.7% in 1996 and 97.1% in 1997). *See* 47 C.F.R. § 76.922(g).

[48]A different set of four MSOs responded to this question than the set reported in Table 1.

[49]For all six MSOs, the change in rates for the same time period was $2.43.

$0.43 (or 64.2%), respectively, to the subcategories of sports, news, children's, and "all other" programming. Table 2 and Chart 3 show this breakdown for the year ending July 1, 1997.

23. Applying these amounts to the total increase in rates between July 1, 1996, and July 1, 1997, we found that the increase in aggregate expenditures for sports programming license fees accounted for 5.3% of the total increase in rates over that period ($0.13 divided by $2.45 equals 5.3%). On the same basis, increases in expenditures for news and children's programming[50] accounted for 1.2% and 3.2%, respectively, of the total increase in rates for that period. The "all other," or general entertainment, category accounted for 17.6% of the total increase in rates.[51]

24. On average, for the year ending July 1, 1997, the Inquiry participants reported that 10.4% of the total increase in license fees was attributable to affiliated programming. These same MSOs reported that, for the same period, affiliated programming networks accounted for 12% of all programming networks[52] on their regulated tiers. Increases from unaffiliated programmers accounted for the remaining 89.6% of the total increase in license fees, while unaffiliated programming networks accounted for 88% of all programming networks carried. The four MSOs responding to this question included a mix of operators with widely varying degrees of affiliation. For the year ending July 1, 1997, for example, the most vertically integrated operator reported that approximately 23% of its average regulated channels provided programming from affiliated programmers. This operator also attributed approximately 29% of its programming cost increases to affiliated programmers for the same time period. The least vertically integrated operator, by contrast, reported that approximately 4% of its average regulated channels provided programming from affiliated programmers. For the same time period, that operator attributed approximately 4% of its programming cost increases to affiliated programmers.

B. Channel additions

25. The Commission's channel addition rules allow operators to recover programming costs and other costs incurred when operators add channels to their systems. Until December 31, 1997, operators were permitted to increase their rates using either of two methods to account for the addition of channels to CPSTs and single-tier systems after May 15, 1994. The two methods of rate adjustment were the per-channel adjustment factor and the Operator's Cap.[53] Neither method is currently available to operators. By its own

[50]One MSO notes that reported increases in the cost of children's programming are partially due to the migration of the Disney Channel from unregulated premium status to a regulated tier.

[51]Of the 28.2%, the amount of average monthly rate change attributed to programming cost increases, the sum of the four subcategories account for 27.3%. The remaining 0.9% is attributable to non-license fee programming cost increases.

[52]The term "all programming networks" refers to all channels on regulated tiers including broadcast and PEG channels as well as satellite channels.

[53]The Commission modified its initial rules to allow operators to increase their rates by a per-channel adjustment factor to reflect the addition of new channels and to add a 7.5% markup to recoverable programming costs. (*Second Order on Reconsideration*, 9 FCC Rcd at 4139.) Under the Operator's Cap method, which was adopted in a later modification to the rules, operators were permitted to increase their monthly CPST rates during

(continued...)

terms, the rule authorizing these methods expired on December 31, 1997. During the period both methods were in effect, operators were required to elect their preferred method the first time they adjusted rates after December 31, 1994, to reflect a channel addition that occurred on or after May 15, 1994.[54] They were required to use the elected methodology for all channel additions through December 31, 1997.[55] Neither method was intended to offer a precise measure of the actual cost increase experienced by an operator when it added channels. The Operator's Cap, in fact, gave operators the opportunity in some cases to adjust their rates by more than the actual cost associated with channel additions.

26. The Price Survey indicated that rate adjustments due to channel additions accounted for 13% of overall rate increases for the 12-month period ending July 1, 1997.[56] The Inquiry participants attributed 14.4% (based on three responses) of the increase in rates between July 1, 1996 and July 1, 1997, to channel additions. The participants' channel addition rate adjustments were based primarily on the now-expired Operator's Cap method.

C. System Upgrades

27. Upgrade costs may be recovered through a streamlined cost-of-service filing in which the operator documents the actual costs of the upgrade.[57] In some cases, operators have undertaken upgrades as part of a social contract.[58] The Commission's Social Contracts with Time Warner Cable and MediaOne (formerly Continental Cablevision, Inc.) allow those two operators to increase monthly rates by $1.00 per subscriber each year for five years.[59] The total rate increase over the five-year period is intended to compensate the operators for their upgrade costs.

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calendar years 1995 and 1996 by up to $1.50 per subscriber to account for the costs of new channels and associated license fees, and by an additional 20 cents per subscriber plus actual license fees during calendar year 1997. The Operator's Cap was designed to approximate the per-channel rate increases competitive cable systems could be expected to implement when they added channels and was intended to compensate operators for the infrastructure costs of adding the capacity associated with new channels of programming, the license fees for the new programming, and marketing costs. *(Sixth Order on Reconsideration,* 10 FCC Rcd at 1230-31.)

[54]47 C.F.R. § 76.922(g)(1).

[55]*Id.*

[56]*Price Survey Report*, 12 FCC Rcd at 22766.

[57]47 C.F.R. § 76.922(j). Operators use FCC Form 1235 to increase rates on this basis.

[58]*Social Contract for Time Warner*, 11 FCC Rcd 2788 (1995), *appeal pending sub nom. Intercommunity Cable Regulatory Comm'n v. FCC*, No. 96-1027 (D.C. Cir., filed Jan. 29, 1996) (motion to hold in abeyance granted by order dated June 12, 1996); *Social Contract for Continental Cablevision*, 11 FCC Rcd 299 (1995); *Continental Cablevision, Inc., Amended Social Contract*, 11 FCC Rcd 11118 (1996); *Social Contract for Comcast Cable Communications, Inc.*, 13 FCC Rcd 3612 (1997).

[59]In the fifth year, for example, the permitted monthly rate increase would be a cumulative total of $5.00 per subscriber.

28. The 1997 Price Survey indicated that 11% of rate increases during the 12-month period ending July 1, 1997, were attributable to infrastructure upgrades.[60] The Inquiry found that upgrades, in general, comprised a higher proportion -- 18% -- of average monthly rate increases than the proportion indicated by the Price Survey for the same period.[61] MSOs with social contracts reported substantial upgrades pursuant to their social contracts with the Commission. One such MSO adds, however, that its upgrade costs have substantially exceeded its upgrade-related rate increases. Three MSOs reported that although they have completed system upgrades and, in some cases, have expended considerable sums to do so, they have not sought to recover their upgrade costs in regulated subscriber rates. One MSO states that it has used borrowed funds as well as revenues from advertising and other non-regulated sources to finance over $3.5 billion in upgrades. Another MSO states that, in addition to rates for regulated services, it has drawn on advertising revenues, home shopping commissions, and launch and marketing fees to finance its upgrades.

D. Revenues

29. Operators earn revenues not only on regulated subscriber services but also from unregulated subscriber services (such as premium and pay-per-view channels) and non-subscriber sources, such as launch fees and sales commissions paid by programmers and from local advertising. The 1992 Cable Act required the Commission to evaluate a number of factors when it established regulations to ensure that cable television rates are reasonable. Among other things, the Act required the Commission to consider "the revenues (if any) received by a cable operator from advertising from programming that is carried as part of the service for which a rate is being established, and changes in such revenues, or from other consideration obtained in connection with the cable programming services concerned."[62]

30. Operators that increase their rates to recover increased programming costs must adjust their permitted rates, on a channel-by-channel basis, to account for any revenues received from programmers, such as sales commissions.[63] Offsetting is designed to permit operators to recover only their net programming costs.[64] The Commission determined that off-setting "best balances the interest of the cable operator in being compensated for adding new programming and the interest of subscribers in receiving reasonable rates."[65] Under the channel-by-channel offsetting method, operators are not required to use revenues derived from programming on one channel to offset the costs of programming carried on another channel. If a programmer

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[60] *Price Survey Report*, 12 FCC Rcd at 22766.

[61] An explanation for the higher proportion attributable to system upgrades found in the Inquiry in comparison with the Price Survey is that the four MSOs who provided consistent information include a higher proportion of operators with social contracts (two out of four) than the Price Survey sample. For all six MSOs responding to the Inquiry, 9.9% of the total change in average monthly rates was attributable to system upgrades.

[62] Communications Act § 623(c)(2)(F), 47 U.S.C. § 543(c)(2)(F).

[63] 47 C.F.R. § 76.922(f)(7); *see* Letter dated May 6, 1994, from Alexandra M. Wilson, Acting Chief, Cable Services Bureau, to Sue D. Blumenfeld and Philip L. Verveer, QVC Network, Inc., 75 Rad. Reg. 2d (P & F) 292 (1994).

[64] *Rate Order*, 8 FCC Rcd at 5789 n.602.

[65] *Sixth Order on Reconsideration*, 10 FCC Rcd at 1252.

does not charge the operator for carriage, as is generally the case with home shopping channels, then the operator is not required to use the revenues derived from that programming as an offset to the costs of other programming. As a practical matter, therefore, sales commission revenues are not applied against operators' increased programming costs to reduce the rate increase associated with those costs.

1. Advertising Revenues

31. The Commission does not require operators to apply advertising revenues as a general offset to rate increases under the benchmark/price cap method.[66] Advertising revenues are considered in cost-of-service rate filings,[67] but the majority of cable systems use the benchmark/price cap method and are not required to apply advertising revenues against programming costs.

32. Average advertising revenues earned by Inquiry participants grew by 28.9% between 1996 and 1997, from $130.6 million to $168.4 million, as shown in Chart 4.[68] Participants reported that at least some of this growth is due to system acquisitions and to subscriber growth. As a percent of average regulated revenues, Inquiry participants' average local advertising revenues have increased from 7.4% in 1996 to 8.3% in 1997, as shown in Table 1.[69]

33. The participating MSOs report that despite the recent growth in advertising revenues, this source of revenue is still relatively small and is not reliable. One MSO states that gross profit margins have declined as programming costs have increased because revenues from advertising and other sources have not kept pace with programming cost increases. Several MSOs note that it is not feasible for operators to increase advertising rates in step with programming cost increases because they face competition for advertising sales from many other local media outlets, including local radio and TV stations, newspapers, and direct mail. One MSO adds that operators' ability to sell advertising time is further constrained by their inability to deliver a large audience share, since cable system subscribers are located in contained geographic areas. Another MSO points out that increased advertising fees must be justified by increased program ratings. Several operators note that the generation of advertising revenues entails costs, including the costs of selling advertising time and inserting advertising into cable programming, which are not recoverable under the Commission's rules as external costs. Summit states that small operators, in particular, are unable to recoup programming cost increases from advertising revenues, noting that on 24 of its 25 systems, the costs of selling and inserting advertisements outweigh the value of the advertising. Summit states that its total advertising revenue in 1997 was $19,937, or 13 cents per subscriber per month. Summit adds that programmers use the advertising availabilities not used by Summit. However, they refuse to share any of the resulting revenues with Summit, despite Summit's requests that they do so.

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[66] *Rate Order*, 8 FCC Rcd at 5789 n.602.

[67] *Id.*

[68] The revenue figure is based on responses from four of the six MSOs. *See* paragraph 7. Advertising revenues of all six MSOs grew by 27.6% between 1996 and 1997, from an average of $107.8 million to $137.6 million.

[69] For all six MSOs, average local advertising revenues as a percent of average regulated revenues increased from 7.2% in 1996 to 7.9% in 1997.

2. Launch Fees

34. Launch fees are paid by a programmer to an operator, usually on a per-subscriber basis, as an incentive for the operator to add the programmer's service. Operators that had used the Operator's Cap method for channel additions were required to use launch fee revenues received from any programmer first to offset the permitted per-channel Operator's Cap rate increase for that programming service. Any remaining launch fee revenues were then required to be used to offset programming costs.[70] The Bureau determined that no offsetting was required if the payment was used to cover "verifiable and reasonable promotional expenses" incurred by an operator to market the new programming.[71] The Bureau later clarified that the channel-by-channel standard for offsetting would be applied on a programmer-specific basis where a single cable channel is shared by different programming services.[72]

35. Only two Inquiry participants provided information on revenues from launch fees, and for those two MSOs launch fees amounted to a tiny fraction of total regulated revenues. One MSO reported that launch fees are an unreliable source of revenue, and that this source of revenue may disappear in the future as more channel capacity becomes available with the introduction of digital capability.

3. Sales Commissions

36. Sales commissions are revenues from programming, such as home shopping channels, that programmers pay cable operators in exchange for carriage. Operators must use sales commission revenues to offset, on a channel-by-channel basis, the cost of the programming from which such revenues are derived.[73] As a practical matter, the rate benefit derived from such offsets, if any, is minimal, because home shopping programmers typically do not charge operators license fees to carry their programming.[74]

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[70]47 C.F.R. § 76.922(g)(3)(ii).

[71]Letter dated May 19, 1994, from Kathleen M. Wallman, Acting Chief, Cable Services Bureau, to Frederick Kuperberg, Senior Vice-President, The Disney Channel, 9 FCC Rcd 7762 (1994). The Bureau stated: "As long as, in individual cases, the reimbursements are part of a reasonable marketing plan and it does not appear that the operator and the programmer have significantly altered reimbursement practices primarily in order to avoid offsetting, we will not require application of" the offset rule. *Id.* at 7763-64.

[72]Letter dated December 19, 1994, from Meredith J. Jones, Chief, Cable Services Bureau, to Maurita K. Coley, Senior Vice President, Legal Affairs, Black Entertainment Television, Inc., 10 FCC Rcd 685 (1994). Operators seeking to recover the costs of programming added to a shared channel must obtain Commission permission to do so without off-setting the revenues against the programming costs. *Id.* at 686 n.6.

[73]Home shopping network operators initially were required to offset the 20 cent per-channel Operator's Cap mark-up with sales commission revenues received from such channels. *Rate Regulation*, MM Docket Nos. 92-266 & 93-215, Twelfth Order on Reconsideration, 11 FCC Rcd 785, 789 (1995). The Commission later eliminated this requirement because of administrative and practical difficulties, stating that "the revenues derived from sales commissions can vary with each reporting period which renders difficult the incorporation of these fluctuations into the ratemaking process." *Id.* at 790.

[74]*Id.* at 789.

37. The Inquiry results indicate that revenues from commissions received from home shopping networks averaged $18.2 million and $19.8 million in 1996 and 1997, respectively, as shown in Table 1.

IV. Analysis

A. Effectiveness of Regulations Governing External Costs

38. The 1992 Cable Act directed the Commission to prescribe regulations that protect subscribers from having to pay unreasonable rates. The Act also sought to promote the expansion of cable system capacity and program offerings. The Commission attempted to strike a balance between these two goals first by implementing a rate rollback to ensure that regulated rates approximated the rates that would be charged in the presence of effective competition, and then by adopting a price cap regime to govern future rate increases due to increasing costs. Finding that these measures alone were insufficient to encourage operators to expand their program offerings, the Commission subsequently adopted incentives for operators to expand their channel capacity and provide additional programming.

39. The Commission's rules governing regulation of cable television rates were designed to promote investment in high-quality programming, infrastructure upgrades, and advanced services while at the same time maintaining reasonable rates for subscribers. The average channel capacity of cable systems has increased steadily over the period of regulation, and the number of national cable programming networks has undergone a period of rapid growth.[75] But the cost, in terms of increases in cable rates, has been high. During the two-year period under review, rates grew by more than 8% per year. On a per-channel basis, cable rates initially declined under rate regulation, but, more recently, have increased, though at a much slower rate than overall cable rates.[76] The average monthly rate increase on a per-channel basis was 1.7% for the year ending July 1, 1996, and 3.3% for the year ending July 1, 1997.[77]

B. Effect of Programming Costs on Rates

40. In adopting the initial rate regulations, the Commission stated that it would monitor the impact of external cost treatment of programming costs and would impose a cap or other restriction on rate increases due to programming cost increases if "precipitous" rate increases or other harmful effects resulted from external cost treatment of these costs. Operators have argued that, short of dropping programming services altogether, they cannot control programming costs.

41. The impact of programming cost increases on the level of cable rate increases could have been mitigated in several ways. Operators could have been required to offset programming cost increases with local advertising revenues, either on a channel-by-channel basis (as offsets for launch fees and commissions currently are applied) or on a tier-by-tier basis. Such a requirement would have been administratively complex, however, as it would have required operators and regulators to quantify advertising revenues as well as costs incurred to generate those revenues, on a channel-by-channel or tier-by-tier basis. The Commission also could have

[75] *Cable Television Developments*, NCTA, Spring 1998, at 6, 10.

[76] *See Price Survey Report*, 12 FCC Rcd at 22765.

[77] *Id.*

limited programming cost and/or other external cost pass-throughs by other means. For example, the 7.5% markup on programming costs could have been eliminated. Alternatively, or in addition, external costs could have been capped, perhaps at the level of inflation, with or without an additional allowance for profit. Adoption of this type of cap on programming cost pass-throughs could have prompted operators to use advertising revenues to pay for a portion of programming costs, but would not have required operators or regulators to account for advertising costs and revenues on a channel-by-channel or tier-by-tier basis. The Commission previously considered such a cap on external cost pass-throughs, but declined to adopt it out of a concern for the continued growth of programming.[78]

C. Effect of Affiliation on Programming Costs

42. Information provided by the Inquiry participants did not permit an in depth analysis of the effects of affiliation on programming costs and subscriber rates. Our rules require that license fees charged by programmers to their affiliated operators must reflect either the same rates as those charged to unaffiliated operators or the fair market value of the programming.[79] Data from the Inquiry show that, on average, the ratios of affiliated programming networks to all programming networks (12%), and expenditures on affiliated programming to total programming expenditures (10.4%), are roughly similar. Without examining programmers' costs and pricing practices, which was beyond the scope of this Inquiry, it is impossible to evaluate the effects of affiliation on rates. Nevertheless, the data that we did collect do not suggest that cable operators' programming costs are either systematically higher or systematically lower for affiliated channels than for unaffiliated channels.

D. Revenues

43. Under the Commission's rules, advertising revenues are accounted for in rates only through the cost-of-service rate method, which is used infrequently. Advertising revenues earned by Inquiry participants, other operators, and programmers have grown steadily in recent years. The Inquiry indicates that advertising revenues are not a major source of revenue for operators at this time, since they are equal to about 8% of regulated revenues as of June 30, 1997.[80] Revenues from sales commissions and launch fees appear to be relatively insignificant compared to overall revenues, and there appears to have been little or no growth in these revenues in recent years.

V. Conclusion

44. While rate increases for the most part have been accompanied by upgrades in system infrastructure, rate increases consistently several times the rate of inflation have engendered numerous critics of the rate-setting policies of cable operators and of the Commission's rate regulations permitting such

[78] *Rate Order*, 8 FCC Rcd at 5788.

[79] 47 C.F.R. 76.922(f)(6). This provision suggests that, for a given program service, charges to affiliated and unaffiliated operators should not differ based solely on affiliation status.

[80] It should be noted, however, that average advertising revenues represent a significantly higher percentage when compared with average expenditures for programming on regulated services (35.2%) than when compared with average regulated revenues (8%).

increases. Infrastructure upgrades have enabled many cable subscribers to receive service from state-of-the-art systems capable of offering many more channels of service through fiber-optic cable and advanced system architectures. The introduction of digital service enables subscribers to receive more channels. Many subscribers now receive better signal quality and experience fewer outages. Operators are now able to offer new non-video services such as Internet access in competition with other providers, and are inaugurating local and long-distance telephone services in selected areas. Because cable rates are significantly higher than they were two and three years ago, it matters little that the Cable CPI as shown in Chart 1 is currently moving along a trend that is below a projection of the Cable CPI based on rates prior to regulation in the early 1990's.

45. The Commission's external cost rules, which allow a direct pass-through of programming costs, and the channel addition rules, which provided an incentive for growth, both contributed to the combination of factors resulting in rate increases far in excess of inflation. The Commission was directed by the 1992 Cable Act to ensure that rates are reasonable and that operators are able to upgrade their infrastructure and expand their services. The rate increases have facilitated the ability of operators to upgrade their infrastructure and to expand their services, but the increases are significant and a concern to subscribers.

46. The Commission's channel addition rules, which were in effect until December 31, 1997, were not intended to serve as a refined measure of the actual costs operators incurred when they added channels to regulated tiers. The Operator's Cap method, in particular, sought to provide an incentive to operators to expand their channel capacity and program offerings. The method allowed rate adjustments in excess of an operator's actual costs. The Inquiry indicated that about 14% of rate increases taken during the period under review were attributed to channel additions and that a majority of these additions were made using the Operator's Cap method. This method of rate adjustment to account for channel additions is no longer available to operators.

47. The greatest opportunity to ensure reasonable rates and broad choice in products and services is the development of a competitive environment. In areas where consumers have had a range of providers to choose from, not only for video services but also for telecommunications services in general, those consumers have benefited from lower prices and improved services. In view of the cable industry's ongoing modernization efforts, the industry stands at a critical juncture, with the potential to become a significant competitor in the broader range of telecommunications services. The Commission should continue to remove barriers to competition within its control and encourage a competitive marketplace.

Table F1

PROGRAMMING COST INQUIRY: SUMMARY OF RESULTS
REVENUES AND PROGRAMMING EXPENDITURES FOR REGULATED SERVICES
Based on Averages of Four Large MSOs*

	1996 ($ in millions)	1997 ($ in millions)	Percent Change
Revenues:			
Average Regulated Revenue	**$1,774.5**	**$2,022.8**	**14.0%**
Average Advertising Revenue	$130.6	$168.4	28.9%
Average Sales Commissions	$18.2	$19.8	8.8%
Average Advertising Revenue as a Percent of Average Regulated Revenue	7.4%	8.3%	
Average Commissions as a Percent of Average Regulated Revenue	1.1%	1.0%	
Programming Expenditures:			
Average Programming Expenditures for All Regulated Services	**$397.8**	**$478.1**	**20.2%**
Average Expnditure for Each Subcategory of Programming:			
Sports	$109.7	$127.6	16.3%
News	$42.4	$53.3	25.8%
Children's	$44.2	$55.1	24.6%
"All Other"	$201.9	$242.1	19.9%
Each Subcategory of Programming as a Percentage of Programming Expenditures			
Sports	27.6%	26.7%	
News	10.7%	11.2%	
Children's	11.1%	11.5%	
"All Other"	50.8%	50.6%	
Average Programming Expenditures as a Percentage of Average Regulated Revenue	**22.4%**	**23.6%**	

* Six MSOs responded to the Inquiry; four provided consistent data across a majority of questions.

Table F2

PROGRAMMING COST INQUIRY: SUMMARY OF RESULTS
CHANGES IN AVERAGE MONTHLY RATES AND THE PORTION ATTRIBUTED TO VARIOUS FACTORS
Based on Averages of Four Large MSOs*

	1996		1997	
	$	%	$	%
Average Monthly Rate (Programming Services and Equipment) as of July 1, 1996 and 1997**	**$26.17**	-	**$28.62**	-
Change in Average Monthly Rate for Year Ending July 1, 1996 and 1997	**$2.21**	-	**$2.45**	-
Programming:				
Amount and Percent of Average Monthly Rate Change Attributable to Programming Costs***	**$0.77**	**34.8%**	**$0.69**	**28.2%**
Amount and Percent of Average Programming Cost Change Attributable to License Fees	**$0.76**	**98.7%**	**$0.67**	**97.1%**
Amount and Percent of Average License Fee Change Attributable to Each Subcategory of Programming:				
Sports	$0.16	21.1%	$0.13	19.4%
Children's	$0.09	11.8%	$0.08	11.9%
News	$0.11	14.5%	$0.03	4.5%
"All Other"	$0.40	52.6%	$0.43	64.2%
Amount and Percent of Average License Fee Change Attributable to:				
Affiliated Programmers	$0.14	18.4%	$0.07	10.4%
Unaffiliated Programmers	$0.62	81.6%	$0.60	89.6%
Affiliated Programming Networks as a Percent of Total Networks on Regulated Tiers		11.0%		12.0%
Channel Additions:******				
Amount and Percent of Monthly Rate Change Attributable to Channel Additions	**$0.62**	**15.1%**	**$0.36**	**14.4%**
System Upgrades:				
Amount and Percent of Monthly Rate Change Attributable to System Upgrades	**$0.25**	**11.3%**	**$0.44**	**18.0%**

*Six MSOs responded to the Inquiry; four provided consistent data across a majority of questions.
The averages reported in this table are based on a different set of four MSOs than the averages shown in Table 1.
**Three MSOs responding to the Inquiry used a sampling approach to develop their responses.They used the same CUIDs as those selected for the 1997 Price Survey sample. The remaining MSO's response was based on FCC Form1240 filings for its regulated CUIDs.
***Programming costs include license fees, retransmission consent and copyright fees, and markups on programming permitted under the Commission's rules. License fees account for the bulk of programming costs (98.7% in 1996 and 97.1% in 1997).
**** Based on three responses.

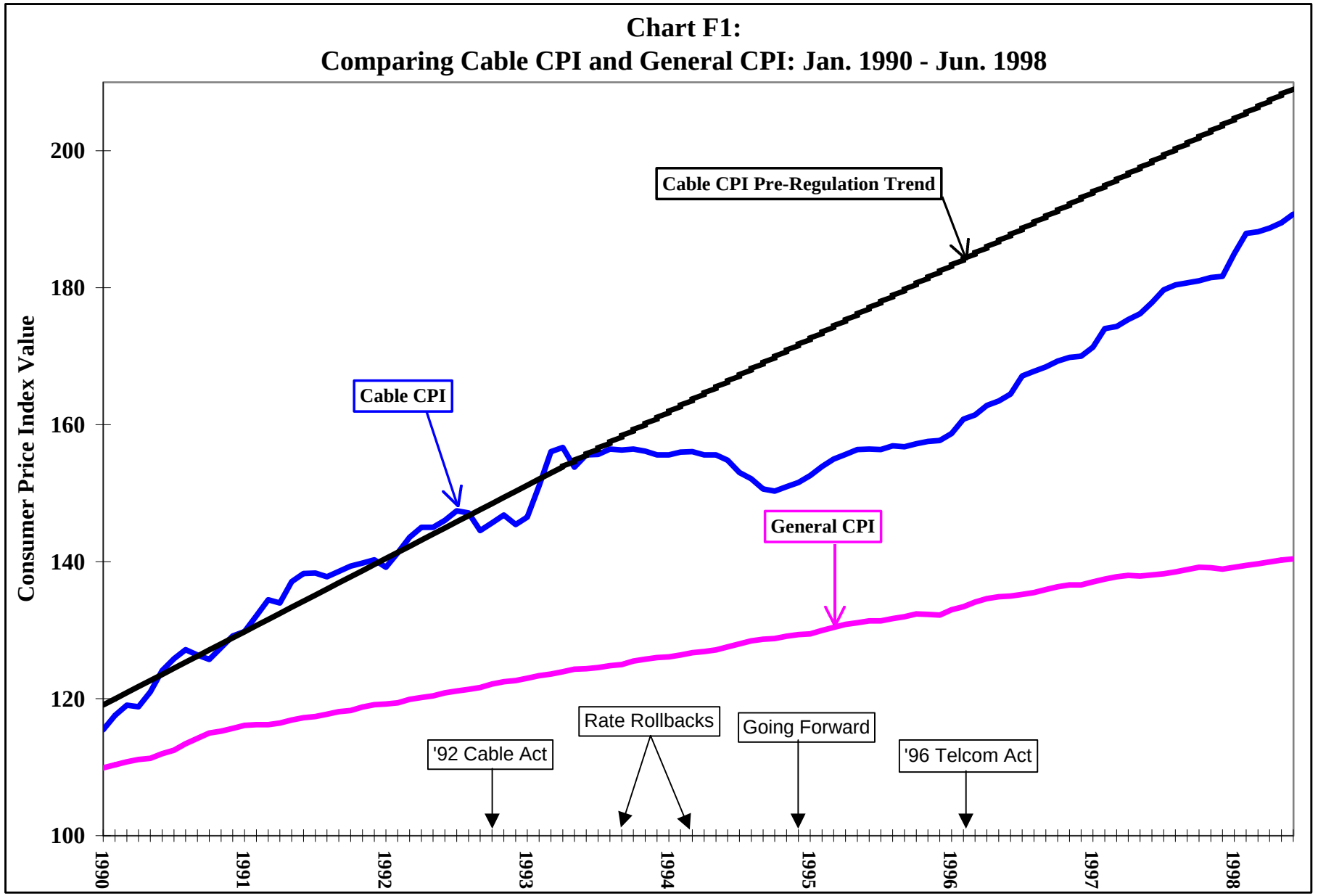


Chart F1:
Comparing Cable CPI and General CPI: Jan. 1990 - Jun. 1998
Consumer Price Index Value
200
180
160
140
120
100
1990
1991
1992
1993
1994
1995
1996
1997
1998
Cable CPI Pre-Regulation Trend
Cable CPI
General CPI
'92 Cable Act
Rate Rollbacks
Going Forward
'96 Telcom Act

Chart F2:
Explanation of Changes in Rates Between 1996 and 1997 for the Noncompetitive Group

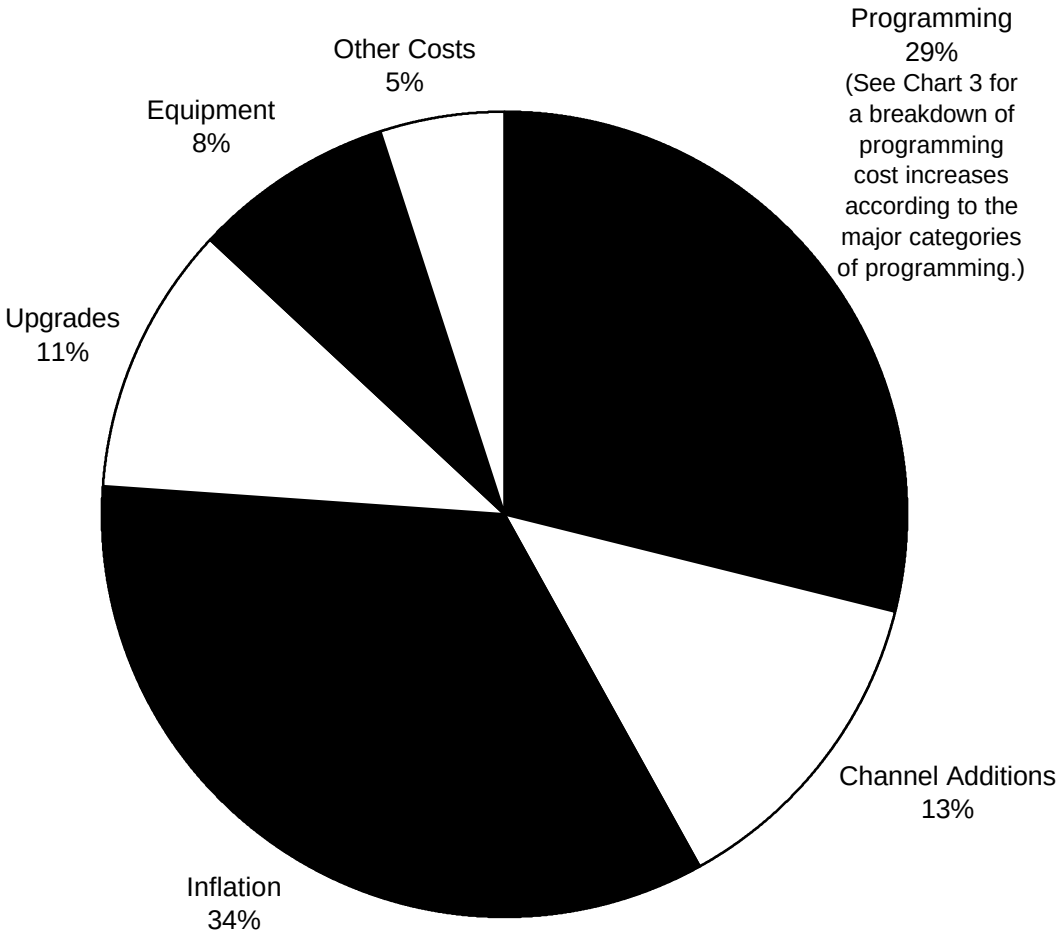


Chart F3:
Breakdown of Licensing Fee Increases by Type of Programming
For Four MSOs for the Year Ending July 1, 1997

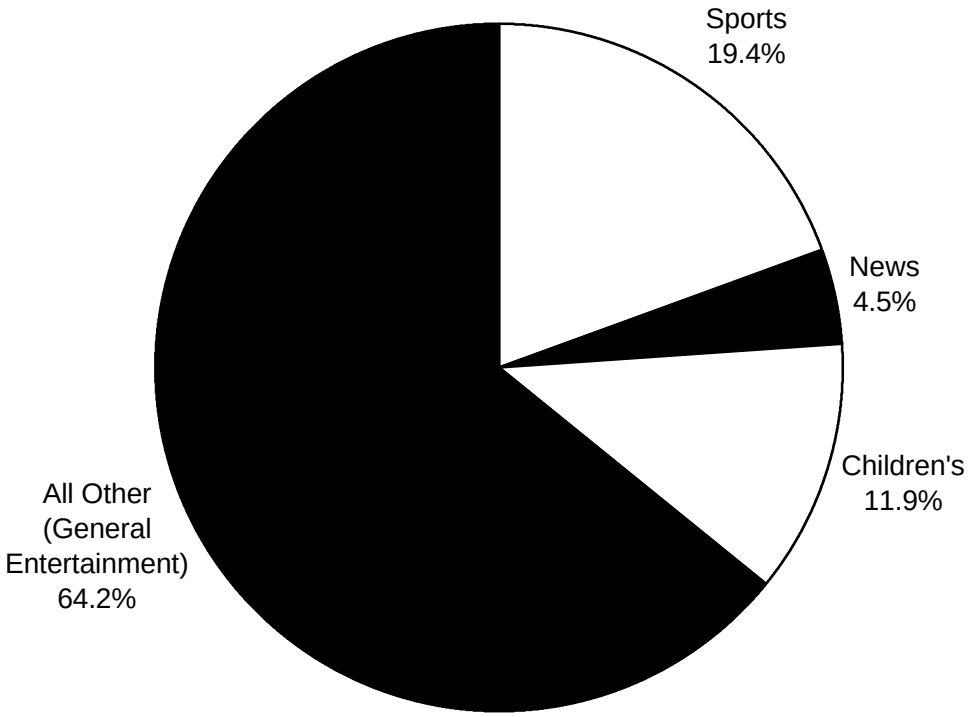
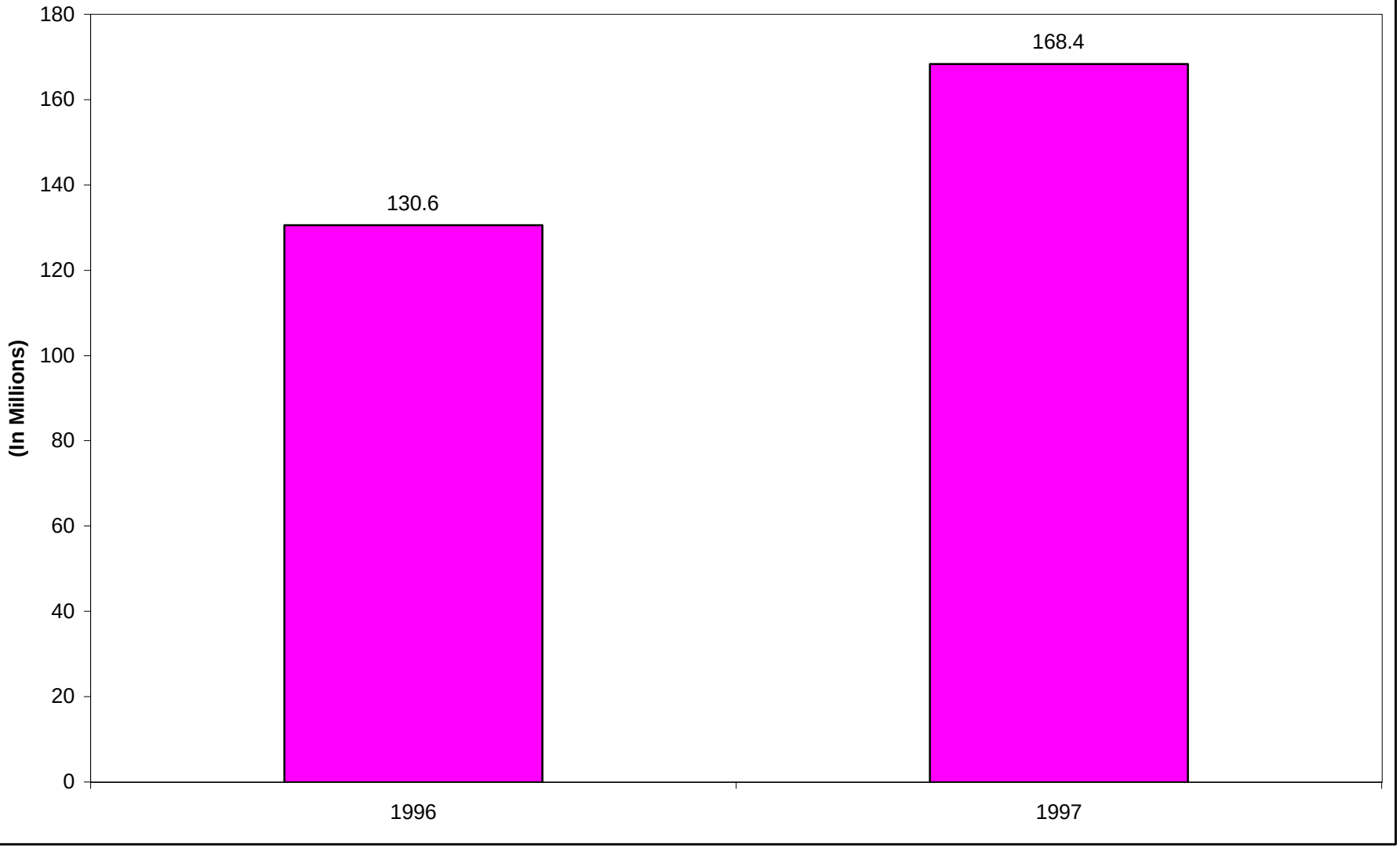


Chart F4
Average Advertising Revenue Reported by Four MSOs



Statement of Chairman William Kennard

Re: In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CS Docket 98-102

When Congress passed the Telecommunications Act of 1996, it affirmed the principle that when it comes to innovation and consumer choice, competition is preferable to regulation. Congress envisioned that the removal of market entry barriers would produce robust competition offering a wide array of viewing choices at reasonable prices to millions of American families across the nation. Our annual report shows that, although competition is increasing, the level of competition that consumers are seeking has not yet arrived.

Eighty-five percent of all households subscribing to multi-channel video service receive that service from their local cable operator (a two percent decline from the 87 percent we reported a year ago). With this high market share, it is not surprising that cable prices rose more than four times the rate of inflation between June 1997 and June 1998.

The drop in local cable operators' dominance of this market is primarily due to the continued growth of DBS systems, and to a lesser degree, the launch of new open video systems and instances where incumbent cable operators have faced head-to-head competition from other cable operators. These cases are immensely important for they teach us an important lesson. That lesson is that competition brings consumer benefits. And, as we continue to move towards a more competitive market, it is my hope that consumers will benefit from lower prices, improved customer service, and additional services.

Over the past year, the Commission has taken a number of steps to foster vigorous competition in this field. We improved our program access rules. We pre-empted rules and regulations that prohibited renters and residents in multiple-dwelling units from setting up satellite dishes and antennae in areas under their exclusive control. We ensured that consumers soon will be able to choose to purchase set top boxes from their local retailer instead of leasing their boxes from their cable operator. And we sought updated information on the state of horizontal concentration in the cable industry and how it affects competitiveness.

The Commission will continue to take aggressive actions to promote competition. I believe that we could do even more if we were given additional statutory tools. Congress has done much to promote competition in this marketplace, and I believe it would be beneficial for Congress to consider taking additional actions to promote competition. Specifically, I believe that Congress should continue to consider whether to amend the Satellite Home Viewer Act to allow DBS providers to carry local broadcast signals. In my view, it is difficult for DBS to develop as a head-to-head competitor to cable if DBS can't carry many of the channels at the heart of our TV experience. In other words, it’s more than a little frustrating to be able to watch a football game a 1,000 miles away, but not be able to tune in to your local news to see if it is going to rain tomorrow. Many consumers have reported this type of frustration with DBS. I believe that removing this prohibition would help promote the further growth of DBS.

I would like to work with Congress as they evaluate other statutory proposals to promote competition. For example, the Commission’s current impact on competition in MDUs is limited because our authority to allow use of the inside wiring by competitors extends only to circumstances where the incumbent video service provider no longer has a legal right to remain in the building. And, as I said only a month ago when we adopted new OTARD rules, I would like to open a dialogue with Congress regarding the possible extension of the OTARD provisions for renters and others who do not have exclusive use or control of suitable areas for

antenna placement. Finally, I would welcome a debate as to whether it would be beneficial to expand the coverage of the program access provisions of the Act.

Finally, I share Commissioner Tristani's vision of a competitive marketplace governed by variety and consumer choice on all levels -- a marketplace in which different firms "vie for consumers with different mixes of price, quality and service." And, I join in Commissioner Tristani's praise of efforts to create additional tiers of cable services. As she so eloquently states, "[o]nly when all consumers have the opportunity to meaningfully express their preferences in the marketplace can we declare victory and go home." I couldn't agree more.

Separate Statement
of
Commissioner Ness

Re: In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Program

This, our fifth annual report on the status of competition in the market for the delivery of video programming, finds that competition to cable is slowly but steadily growing. The record evidences a consistent trend showing that more people each year perceive that they have more than one multichannel video provider ("MVPD") from which to choose.

As is often the case, readers can interpret the data in this comprehensive report in various ways. In my view, the data tell a positive story about the development of multichannel video competition, particularly from Direct Broadcast Satellite service ("DBS"). From July 1994 to June 1998, DBS subscribership has grown from 70,000 to 7.2 million, which, as of June 1998 represented 9.4% of all MVPD subscribers. In each of the last four years, DBS has experienced impressive growth. Indeed, Paul Kagan reports that 2.2 million of the 3.6 million net new MVPD subscribers in 1998 (or almost two-thirds) are choosing DBS.

Last year, our report identified at least three reasons why potential DBS subscribers declined to sign up: high installation costs, significant costs to hook up additional TV sets, and the lack of broadcast television service. Since last year, the cost of installation has plummeted, although it remains expensive to hook up additional sets. Notably, efforts have been made in the last year to address the legislative and technological prerequisites to enable DBS providers to offer local broadcast signals in their respective local markets. Whether it is 'local into local' or consumer education and assistance with installation of rooftop antennas, the key is cooperation between terrestrial broadcasters and DBS providers. Success on this front could make DBS an even better substitute to cable for many Americans.

The level of competition in the multichannel video market should not be measured solely by whether cable continues to lose market share. If cable operators use competitive responses to retain customers, so much the better. We should not fault the cable industry for beefing up its service quality, for example, in light of growing competition. Some of the data in this report show that the "pie" is getting slightly larger, as the number of total TV households grows and the numbers of multichannel video subscribers grows. For example, the total number of television homes increased from 97 million in 1996 to 98 million today. The total number of households subscribing to MVPDs increased 4.1% from 73.6 million in 1997 to 76.6 million in 1998. The number of cable subscribers also continued to grow, rising about 2% from 64.2 million in 1997 to 65.4 million in 1998. Some subscribers have chosen to retain basic cable for local service while adding DBS for its national programming and picture clarity. Thus, both the number of cable subscribers and non-cable subscribers have grown and may continue to grow.

While I am heartened by the progress made in the development of new competition to cable, some concerns remain. Local cable franchise areas served by a wireline competitor, while growing, are limited. The widespread entry by local exchange carriers (LECs) envisioned by the Congress has not yet developed. Not everyone has access to DBS (it is currently available only throughout the Continental United States), and even with our extension, last fall, of the over-the-air reception device accessibility provisions, many, if not most,

residents in multiple dwelling units may not be able to subscribe to DBS. DBS offerings also do not, in general, compete on the basis of price with what is marketed as "basic" cable. For those cable subscribers looking for lower prices, I am hopeful more cable operators will follow the lead of Comcast by offering channel packages at various price points, to the extent such offerings do not impair the launch of new program networks.

The next year or two will be especially dynamic as cable operators enter the voice and data market and broadband data offerings are introduced by cable, DBS, local exchange carriers, and potentially MMDS and others. In addition, as a result of our implementation of statutory provisions enabling the retail market for set top devices to develop, new digital products and services are likely to be offered. The state of competition in the video marketplace could be substantially affected by how these related services are offered, and how they are accepted by consumers.

Practically speaking, competitive markets are evidenced by the availability of choice -- in other words, do people perceive that they have a realistic choice between providers of multichannel video programming? Choices should be available at various prices, should be available to people in various living environments, must be realistic, and must not be transitory.

When markets are fully competitive -- when people have meaningful choices -- the need for government regulation abates and the benefits of competition are manifest: lower prices, new and different service offerings, and better customer service. I am encouraged by the level of competition that has been achieved thus far, and I support efforts by industry and government to attain a fully competitive market for video programming distribution.

SEPARATE STATEMENT OF
COMMISSIONER MICHAEL POWELL

Re: Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CS Docket No. 98-102

Today we transmit the Fifth Annual Report of the FCC to Congress regarding the state of competition in video programming. I wish to offer my view on how to interpret some of the most noteworthy facts contained within this report.

First, a word about concentration in the multi-channel video market. I take issue with some of the analysis in this report designed to quantify the extent of concentration in this market. I am not convinced that the product markets are properly defined and I question the value of hypothetical concentration analysis to produce an HHI index. But it really does not matter. By any measure, cable commands the lion's share of the multi-channel video market, though that share continues to steadily decline. Indeed, having started from a position of near total monopoly, it would be surprising if it did not control a large market share only three years since the passage of the 1996 Act. What must be understood is that market share alone does not support the conclusion that a given cable operator is exercising market power to the detriment of consumers.

As antitrust scholars well know, monopoly (or near monopoly) is not per se illegal, nor does the presence of a monopolist necessarily mean that there are anti-competitive effects flowing from its dominant position. A multitude of competitive alternatives certainly is always preferred, but the existence of only a few is not sufficient to pronounce anti-competitive harms to consumers. What must be examined is (1) the ability of the monopolist to raise prices substantially in excess of marginal costs, (2) whether a monopolist can restrict output, and (3) whether the lack of competition results in a lack of innovation. When one examines the state of the cable industry, I do not believe one can fairly conclude that consumers are suffering from cable's dominant position.

Price Increases: Many of cable's critics quickly point to the increases in cable prices as evidence that there is a lack of competition. Perhaps, but one cannot proclaim that prices are increasing faster than the consumer price index and rest the case. Price increases, of course, are not anti-competitive unless they substantially exceed the private firm's costs. If price increases are largely a consequence of increases in cost, it is incorrect to cite price increases as evidence of competitive harm. In the case of video programming, it is indisputable that programming licensing fees MSO's must pay have increased dramatically (18.4% last year) as have programming costs (20.9% last year). This report squarely acknowledges these facts. Moreover, it is not monopolistic behavior to increase prices to upgrade infrastructure and facilities that will ultimately benefit consumers in the market. In this report, we find that capital expenditures to upgrade cable facilities were up 21% last year. It is particularly dubious to cite price increases to demonstrate lack of competitive discipline when prices have been regulated.

Undoubtedly, in areas where there is direct competition to cable, the prices have been lower than non-competitive systems, but not by that much. In 1997, the price difference between competitive and non-competitive systems was $1.57, down from $1.69 the previous year. In short, most competitors are entering the market at similar price points.

Output and Value: With a medium such as multi-channel video that is sold in different pricing combinations in different systems across the country, it is risky to examine aggregate price increases across the industry and the full range of pricing packages. It is my understanding that, while aggregate prices have increased, the price per channel has not increased. Cable operators have steadily increased the number of channels and programs available to consumers. In economic terms, they have increased output. They have not restricted output, which is the hallmark of monopolistic behavior. Price per channel measures also more fully incorporate the concept of value. Consumers do not care solely about price. They want a good value – the ratio of price to product. More channels, more original programming, higher quality programs are consumer benefits for which many may be willing to pay more. In fact, with this expansion has come continued growth in subscribership suggesting that consumers do value the product.

Many respond to this point by rightly pointing out that many consumers do not wish to pay for 500 channels, or greater (more expensive) sports programming, or premium movies. This is true enough. But, there appear to be many low cost alternatives available to those customers and those basic packages have not increased significantly in price. Many cable providers offer a relatively low priced ($12 or less) basic tier of service. One operator, Cox, reported that it offers a 20-channel basic service tier to its customers for $11 per month and that 5% of its subscriber choose to use only this service. Another provider, Comcast, reported that it offers a basic service consisting of local broadcast signals and C-Span for about $9-12 per month. All reports that I have seen indicate that these basic tier prices will remain relatively low. Moreover, they will continue to be regulated even after the March 31, 1999 sunset of upper tier rate regulation.

Innovation: Finally, when looking at monopoly behavior to determine if one sees signs of anti-competitive effects, one looks to see if the firms are innovating. Here, it is clear that cable is doing so. Not only have there been steady increases in the quality of programming as discussed above, but also this industry has been investing significant sums to upgrade plant for high speed, two-way capability. This is allowing the industry to begin to offer residential phone service in direct competition with incumbent phone companies—a development Congress clearly hoped for in the 1996 Act. Moreover, the rapid innovation of cable plant is accelerating the universally shared desire to bring broadband internet services to homes and residences.

Competitors and Barriers to Entry: All this said, I too would love to see greater competition to cable. I believe it will provide some price discipline, but just as importantly, competition will accelerate product innovation. While there are many ways to skin the cat, DBS clearly is shaping up as the singularly most significant competitive alternative to cable. And, it is coming on strong. DBS subscribers increased by 40% last year. Two out of three new subscribers of multi-channel video chose DBS over cable. And, DBS is now very competitively priced, having slashed equipment costs and developed comparable or superior packages of programming. With the flurry of acquisition activity we have seen by the leading DBS providers in recent weeks, DBS's future looks bright.

There are clearly many barriers to breaking into this market. The inability to offer local signals, the challenge of getting dishes set up in some areas, and access to programming are just a few of them. But, it is worthy to note that many of the "barriers to entry" are regulatory, rather than a consequence of a monopolist's market power or control of essential facilities. I sincerely hope the Commission, the States and Congress work to lower some of these barriers over the coming year.

Overall, I believe that the factual story this report tells is a positive one. The report indicates that there are promising trends in the video programming industry. Despite some entry barriers, we continue to see forays

by telephone companies and other utilities, satellite companies and wireless providers into this market. Investment in this arena is strong. I believe this is so not just because the video business is a good one, but also because of the promise of the coming broadband market. Broadband offers the potential for new revenue streams for MVPD providers and, in turn, will provide consumers with new products and new choices. We should be careful not to take actions that would threaten further growth.

STATEMENT OF COMMISSIONER GLORIA TRISTANI

In the Matter of Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CS Docket No. 98-102

Debates about the status of cable competition often seem a rote exercise. One side asserts that competition has arrived and that market forces now can be relied upon to protect consumers; the other side claims that cable's dominant market power remains intact. One side argues that DBS has emerged as a substitutable, if not superior, video product to cable; the other side dismisses DBS as a high-end option. One side states that consumers are receiving more value (i.e., more and better programming services) for their money; the other side stresses the fact that rates continue to rise at more than four times the rate of inflation.

If few minds are ever changed during these debates, it may be because both sides are partly right. They are just focused on different consumers. Those who assert that competition has arrived are focused on a particular category of video consumers: those who want and can afford large programming packages. The cable industry has invested billions of dollars in capacity upgrades -- and plans to invest billions more -- in order to keep these consumers from defecting to DBS and, more importantly, to be able to exploit new revenue opportunitites like high-speed Internet access. As it happens, both reasons underlying cable's expanding capacity (i.e., increased channels and new services) are aimed at similar consumers, who tend to be younger and more well-off than the nation as a whole.[1] Although the cost of upgrades and new services may have caused rates to climb four times faster than the rate of inflation, these consumers may very well feel that the higher prices are justified by the increased value of the delivered product.

These consumers can look forward to even better times ahead. On the video side, if the up front costs of DBS continue to decline (and especially if DBS providers are able to provide local broadcast signals), an increasing number of consumers of large programming packages will find DBS and cable to be complete substitutes for each other.[2] On the data side, several entities, including telephone companies and wireless operators, are moving to enter the high-speed data business. It thus appears that these consumers can expect to have multiple service providers competing to serve both their video and data needs.

But there is another group of consumers who are not doing so well. These consumers do not want, cannot use or cannot afford large programming packages or high-speed data services. They are happy with plain-old cable service and would have kept a more modest level of service if they had been given that option.

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[1] *See Yankee Group Presentation -- Satellite TV: Research Overview*, April 15, 1998 (stating that average new DBS household income is 51% greater than average household, and that average new DBS subscriber is 50% more likely than average to be between age 18 and 34); *Falling Through The Net II: New Data on the Digital Divide*, NTIA Study July 1998 (finding that 49.2% of U.S. households with income above $75,000 had an online service, compared to only 9% of U.S. households with income between $20,000-24,999, and that only 8.8% of households over 55 years old had an online service, compared to 18.6% of the population as a whole).

[2] The major exception remains the 28% of American households in multiple dwelling unit buildings. Although the Commission has interpreted Section 207 of the 1996 Telecommunications Act to the limit of our stautory authority, an MDU resident can still be denied the right to install and use a DBS dish unless he or she has a balcony or other outdoor exclusive use area on which a dish can be placed and that faces the right direction to "see" the satellite.

But by and large they were not. Instead, they were confronted with a take-it-or-leave-it proposition: pay big rate increases for additional services they do not want and did not ask for, or lose all the cable channels that they have come to rely upon for news and entertainment.[3] And unlike consumers of large programming packages, there was no DBS or DBS-equivalent giving them any real alternative.[4] Not surprisingly, these consumers are unimpressed with the argument that they are actually better off with the additional services because their per channel cost may have gone down. That argument assumes that all channels have equal value when, to these customers, the value added by the new channels is zero.

In a truly competitive market, things would be different. In a competitive market, different firms would vie for consumers with different mixes of price, quality and service. The market would sort out what particular combinations of those factors succeed. Some consumers would be willing to put up with poor service in exchange for bargain-basement prices; others would opt for better service at higher prices. Only consumer choice freely expressed -- and not industry or government edict about what consumers "should" value -- can be counted on to reach the right result. It shows how starved we are for competition that anyone could look at the competitive choice provided by DBS and declare victory.

I am aware of all the reasons why some say additional choice for consumers will not work -- subscribers would need addressable set-top boxes, new channels would never survive in an a la carte world, and so on. I make just a few observations. First, most of the technical and other objections to more choice for consumers apply to a purely a la carte world. But we should not allow the perfect to become the enemy of the good. Even *some* choice (e.g., two or three tiers in place of the current take-it-or-leave approach) is better than none. Second, I reject the notion that consumers should be forced to buy additional services that they do not want until they can be made to realize how valuable these services are. We do not do that with magazines, toothpaste or soda pop. For other products, companies use marketing techniques find a way to entice consumers to affirmatively select their product. Cable programming services should be no different. In a market economy, consumers can and must be counted on to determine which products should succeed and which should fail.

In the end, it all comes down to trusting the consumer. I am constantly amazed in Washington at the number of people who express complete faith in markets but little faith in living, breathing consumers. I trust consumers to make the right choices about the mix of price, services and quality that is appropriate. Whether or not those choices match the industry's business plans or the expectations of Silicon Valley investors is secondary. Only when all consumers have the opportunity to meaningfully express their preferences in the marketplace can we declare victory and go home.

[3] I note that some operators like Comcast, to their credit, appear to have added new programming as optional tiers rather than simply adding to the size of existing tiers.

[4] I do not believe that relegating these consumers to the Basic Service Tier ("BST") is the answer. As an initial matter, many cable systems only offer one tier of service. Further, even on those systems that offer more than one service tier, many consumers want more from cable than simply a broadcast reception service. And my understanding is (and I welcome evidence to the contrary) that few BSTs, if any, give consumers a choice of receiving, say, their local broadcast channels and the most popular cable programming services.

Dissenting Statement of Commissioner Harold Furchtgott-Roth
Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, CS Docket No. 98-102

For the reasons that follow, I must respectfully dissent from the 1998 "Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming."

I.

As an initial matter, I do not believe that the issuance of this Competition Report fulfills our duties under the Communications Act. Instead of examining the state of competition "in the market for the delivery of video programming," 47 USC section 628(g), as the statute prescribes, the Report artificially limits its analysis to the delivery of "*multichannel* video programming."[1] There are, of course, many forms of video programming that do not come bundled in channels but that are still part of the general video distribution market. Unfortunately, the Report does not take full account of these very real forces in its investigation of competition.

For instance, the report considers broadcast service only as a competitor to multichannel video programming distributors ("MVPDs") in advertising, programming acquisition, and programming production, *see supra* at paras. 95-101, but not as an independent delivery source of video programming. Yet the statutory definition of "video programming" specifically *includes* broadcast programming. *See* 47 USC section 602(20) (providing that "the term 'video programming' means programming provided by, or generally comparable to programming provided by, a television broadcast station"). In focusing primarily on what is a *submarket* of video programming -- the "multichannel" distribution market -- rather than the entire market, the report does not fully meet the requirements of the statute.

The language of the statute also makes clear that Congress considered the delivery of video programming to constitute a single "market," *see id.* section 628(g) (referring to "the market" for video programming delivery), not a conglomeration of "markets," as the very title of this Report suggests in speaking of "[m]arkets" for the delivery of video programming. We should, as a plain statutory matter, have considered the delivery of video programming a single market in this Report.

II.

In addition to the above-described statutory reasons to view the relevant market participants as more than just MVPDs, economic theory supports that conclusion.

A product market is not comprised of perfectly substitutable products. *Cf. supra* at para. 63 (discussing whether DBS "represents a substitute" for cable). Rather, "[a] product market is a group of goods or services whose availability and prices *discipline* one another." Crandall & Furchtgott-Roth, *Cable TV: Regulation or Competition?* at 26 (1996) (emphasis added). For its part, cable television

[1]It is true that the general "purpose" provision of section 628 refers to "increasing competition and diversity in the multichannel video programming market." 47 USC section 628(a). That (hortatory) provision, however, is not the section pursuant to which we issue this Report. Section 628(g), the section specifically requiring this Report, contains the more directly relevant and thus trumping language.

> provides a variety of entertainment, information, and even home shopping programming. Similar services may be obtained from local television stations, satellite retransmissions, local sports teams, movie theaters, video rentals, newspapers, magazines, radio stations, and retail shops.

Id. In my opinion, monopoly power, where it exists, can be limited -- or "disciplined" -- where "theaters, a large number of broadcast stations, video rentals, live events, and other diversions are readily available." *Id.* at 105.

Thus, in economic terms, the sources that I believe should be considered in analyzing the amount of competition to cable include, at least, broadcast televisions stations, DBS, videotape rentals, motion pictures, even theatrical productions and, at some point in the not too distant future, internet streaming video.[2] From this perspective on the relevant product market, it would not, for instance, appear "unlikely that broadcast television will offer consumers a . . . service in competition with cable," *supra* at para. 100, but that they *already do so*.

More broadly, when considering the entire video programming market, not just segments of it, one finds that American consumers have more options for the receipt of video programming than ever before. At any time of day, any day of the year, consumers can choose from a wide and ever-widening array of video programming for their entertainment, information, and education. Among other things, they can watch free broadcast television, rent a film, go to the theatre, enjoy DBS sports programming, watch cable news, or order a pay-per-view movie. It takes some impressive intellectual gymnastics to try and find a lack of competition among the providers of these choices in video programming for the American consumer.

This general analytical problem of the proper product market manifests itself in the Report in more specific ways too. Section III looks at market share but considers only cable and non-cable MVPDs, not video programming distributors generally. These market share numbers are distorted by the use of what is, in my opinion, an inappropriate denominator. Similarly, in the discussion of concentration levels based on the Herfindahl-Hirschman Index ("HHI"), the Report measures only MVPDs. HHI numbers can be useful in considering concentration levels in product markets but they are rendered meaningless when applied to market *segments* instead of *markets*.

Likewise, Section IV, in considering instances of competition, assumes that competition only exists when there is more than one (usually facilities-based) MVPD in an area -- which of leads to the conclusion that these instances are more "limited" than if one considered the presence of other video programming deliverers. In my opinion, case studies about "competitive responses" should include, for instance, the relationship between cable and DBS systems.[3]

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[2]While the Report includes some of these sources, such as video rentals, in its descriptive sections, *see supra* at paras. 106-109, it regrettably leaves out this kind of video programming in its subsequent substantive analysis, using "MVPD-only" denominators instead.

[3]The "effective competition" framework of section 623 may preclude consideration of video programming distributors such as DBS in adjudicating effective competition petitions, *see supra* at para. 206 & n. 798, but we are not obliged to use that framework in performing case studies of new entrants in geographic video programming markets for this Report.

In sum, because the Report slices the relevant product market too thin and thereby paints many actual competitors out of the picture, its conclusions about the state of competition are skewed *ab initio*. I thus cannot endorse those conclusions.

III.

The objective facts in the Report -- which, as opposed to the conclusions about competition, I have no quarrel with -- indicate that even in the multichannel-only product market cable today faces a significant amount of competition and that this competition is likely to grow.

The percentage of MVPD subscribers that purchase cable (85%) is not, in itself, cause for concern. This market share statistic provides no direct evidence of the availability, or lack thereof, of alternatives to cable, although it is often cited as such. On its face, it only tells us that many people have opted -- perhaps for reasons entirely apart from lack of choice -- for cable companies over other video distributors. The reasons that consumers choose certain video products over others are complicated, based on personal cost-benefit determinations, and cannot be adduced from this number.

In short, it simply does not follow from the fact that cable has a preponderance of MVPD customers that cable has an unlawful or inefficient hold on the market. The FCC should not be in the business of trying to drive down the percentage of MVPD subscribers who take cable. Instead, we should create an environment that allows alternative providers to meet market demand for these services by removing regulatory impediments like rate regulation.

The fact that cable price increases outpaced the general rate of inflation is not necessarily cause for concern either. The inflation rate measures the *average* increase in prices of consumer goods and services. Producers of goods and services in various industries of course face widely divergent circumstances in terms of production, labor, overhead costs, *etc.;* simply put, not all industries face average costs. Given that cable has invested heavily in systems upgrades, *see supra* at para. 9 (increase of 21% since 1996), that its programming and licensing costs have increased far faster than inflation, *see id.* (increase of 18.4% and 20.9%, respectively), and that cable is providing more video and non-video services to its customers than ever before, *see id.*, a 7.3% price increase, as compared to a national average of 1.7%, is not particularly strong evidence of anticompetitive behavior.

Cable subscribership increased last year. I believe that consumers are not irrational. If they felt that cable, at the price it was offered, did not provide a service that they believed was worth the cost, they would not pay for it. They would migrate to other sources of video programming -- including, most obviously, free over-the-air broadcast programming. But cable subscribership *grew* by almost 2 million since the end of 1996. *See id.* at para. 17; App. B, Table B-1.

This evidence casts substantial doubt upon the notion that cable is somehow "overpriced," given the presence of choices for other video programming services. Either the consumers who subscribed to cable last year did not know of the availability of these services at lower prices in 1996, or the value they placed on the increased quality in cable service outweighed the intervening price increases. I find the latter more plausible.

DBS is making dramatic gains, presenting mounting competition to cable. The Report blinks reality in suggesting that DBS is not having a real competitive effect in the multichannel video programming market.

DBS subscribership has jumped by 2.2 million since June of 1997, an increase of 43%. *See id.* at para. 62. According to Paul Kagan Associates, "DBS is on course to capture nearly two-thirds of all new multichannel subscriptions sold in the U.S. Of the 3.6 mil. projected new broadband subs in 1998, some 2.2 mil. will be sold by the three main DBS providers." *Marketing New Media*, Oct. 19, 1998. For these reasons, market analysts have called DBS "'the fastest-growing consumer electronics product in history.'" *Antennae Attract Viewers to Satellite TV*, Wall Street Journal at B-1, Dec. 1, 1998 (quoting Jimmy Schaeffler, chairman, Carmel Group).

While the Report stresses that DBS and cable are not perfectly substitutable, that is not the point; what matters is whether they are sufficiently similar such that DBS they can have a disciplining effect on each other, as explained above.[4] I submit that the evidence in this report shows that DBS does just that.

The Report itself states that "to meet competition and customer demands for more video channels and advanced services, MSOs must continue to improve their systems through increased channel capacity," *supra* at para. 38, and documents large infrastructure investments, *id.* at paras. 37-41 (noting, among other things, that the largest MSOs have "spent as much as half a billion dollars each on capital expenditures"). These facts are reflective of a market in which, increasingly, cable will play catch-up with DBS. *See, e.g, Satellite TV rivals to merge services*, Washington Times at B-7, Dec. 15, 1998 (noting that Hughes Electronics' purchase of USSB would "expand DirecTV's 185-channel programming lineup to more than 210 channels" and that Echostar Communication's purchase of News Corp. satellites "will mean more channels and services for Echostar subscribers, including 500 channels, Internet access and other date services"). Sounding not at all like monopolists, cable companies are now asserting, in response to actions taken by DBS, that they can still compete in the MVPD market. *Antennae Attract Viewers to Satellite TV*, Wall Street Journal at B-1 ("'Any cable system with an upgraded technical platform can be fully competitive with any DBS company'") (quoting Julian A. Brodsky, vice chairman of Comcast Corp.).

Moreover, DBS has recently made serious inroads on the "competitive disadvantages" of its service. To deal with the issue of local broadcast signals, DBS companies are now "simply adding a separate advanced antenna to their satellite package" to "give customers the local channels they want." *Id.* These "powerful new antennae [are] capable of tapping local to channels with the mere zap of a remote control." *Id.*

Prices on equipment are still falling, from about $150 to as low as zero in some circumstances. As the Report explains, some DBS companies are providing customers with free dishes. *See supra* at para. 73; *see also* Dish Network Advertisement, Philadelphia Inquirer at A-33, Dec. 6, 1998 (offering free digital satellite tv system, after rebate, with guarantee of no rate increases until 2000 with one-year subscription). Also, consumers can decide to pay for professional installation at relatively low prices, or they can choose free do-it-yourself packages. *See id.* (offering $49 installation or free self-installation kit)

Almost two years ago, based in part on research conducted by economists Leland Johnson and Deborah Castleman, I concluded that "[o]nce the cost of receivers, including installation, falls to about $500, DBS should render traditional cable service contestable, assuming that it and cable deliver a similar array of services

[4]Even if substitutability were the point, the Report's suggestion of non-substitutability conflicts with the judgment of the Department of Justice, which has concluded that "[w]hile the programming services are delivered via different technologies, consumers view the services as similar and to a large degree substitutable." *United States v. Primestar, Inc.*, No. 1:98CV01193, Complaint at para. 63 (D.D.C. May 12, 1998).

with equivalent reception quality." Crandall & Furchtgott-Roth at 92. Today, the cost of receivers and installation is *well* below $500; cable and DBS provide similar programming (even without local broadcast, which they now, in any event, facilitate with antennae sales, as described above); and DBS is considered by many to have not just similar but superior reception, as well as sound, quality. In my view, the day has already come when DBS creates a market disciplining and thus pro-competitive effect.

New entrants are on the scene. The Report chronicles well but, unfortunately, then downplays the many innovative providers now on, or waiting in the wings of, the video scene. For example, electric and gas utilities, either on their own or in partnership with others, are providing facilities-based video, telephony, and internet. *See supra* at paras. 120-121. So are local exchange carriers, who are doing overbuilds in many areas. *See id.* at paras. 112-117. New, aggressive SMATV operators are making their presence felt too, sometimes in combination with DBS providers, *see id*. at paras. 90-93, and new technologies are expected to further boost SMATV systems, *see id.* at para. 92.

Internet video, while admittedly not currently comparable to broadcast programming, is around the corner. With digital television, broadcasters, already providing an alternative to cable for the delivery of video programming, will become stronger competitors. Wireless has had its difficulties, but the Commission recently loosened regulatory restrictions on two-way transmissions, *see supra* at para. 85, which the wireless industry now plans to put to use in the market. The wireless industry also plans to take advantage of digital technology. *See id.* at para. 84.

These are just a few of the new kinds of companies that have entered the video programming delivery market. Others are described in the factual sections of the Report. Suffice it to say that many new and improved services are now here and more are coming into being.

* * *

Perhaps it is a question of seeing the glass as half empty or half full, but I believe that we have a significant amount of competition in video programming delivery and that, moreover, the imminent future holds a great deal of promise for even more video competition.