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]

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]

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[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.

[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 (continued...)

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 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

[443](...continued)
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.

[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.

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.

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

[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.

[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*.

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, 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

[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 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.

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 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

[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.

[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").

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 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

[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.

[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 .

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 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

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[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 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.

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 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

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[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.

[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.

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

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

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

[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.

franchises. Seventy-two of these cable franchises were operational as of December 1, 1998.[506] Ameritech serves 200,000 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,

[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.

[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.

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 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

[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.

[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.

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 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

[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.

[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.

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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] 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

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[531](...continued)
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 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

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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 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,

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[536](...continued)
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.

[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.

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 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

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

[546] *Id.*

[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.

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. 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.

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[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.

[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

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).

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

[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.

[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.

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 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,

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[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.

[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.

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]

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]

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[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 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.

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 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]

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[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.

[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.

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 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

[582] RCN Comments at 14-15.

[583] *Id.*

[584] Cablevision Comments at 14.

[585] NCTA Reply Comments at 14.

[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.

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.

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]

[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").

[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.

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 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

[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 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.*

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 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

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[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.

[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.

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 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]

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[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 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 still unnamed company will serve more than 2.4 million

[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.

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*

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[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

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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.

(with 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

[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.

MSO or pair of MSOs 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 video programming services identified, 68 (40%) were vertically integrated and 104

[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.

(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 ratings, nine of the top 15 video programming services are vertically integrated, whereas seven

[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 Report*, 13 FCC Rcd at 1231-1233 App. F, Tbl. F-6.

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 for MVPDs. In this *Report*, the Commission identifies 29 regional sports programming

[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.

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

[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.

the following sports assets: 1) the Philadelphia Flyers NHL team; 2) the Philadelphia 76ers NBA team; and 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

[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.

identity in their 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 a merger with the belief that it will also serve to secure funding for both entities through

[710] *Id.*

[711] *Id.*

[712] App. D, Tbl. D-3.

[713] John Dempsy and Gary Levin, *News Derby Upset by Dark Horse*, 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.

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 Communications Act, granting candidates for

[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.

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 the transmission of competing guides.[736] Gemstar states that this behavior

[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.

[736] Gemstar Comments at 4.

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 sports stars, and because a variety of media are competing against each other

[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.*

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 attractiveness or convenience of the product to consumers.[753] Bundling of programming services

[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.*

[753]ABC Comments at 1.

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 subscribership necessary to attract advertisers.[762] A&E further asserts

[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.*

[762] A&E Comments at 10.

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 Commission found that its existing statutory forfeiture authority can be used in appropriate circumstances

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[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 Order, ("*Program Access Order*"), 13 FCC Rcd 15822 (1998).

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 clarification of the Commission's jurisdiction over terrestrially-delivered as well as non-vertically integrated programming.[777]

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[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.

[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]

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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.

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 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

[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*.

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 *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")

[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*.

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 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

[793] *See Seven Cable Modem Manufacturers Seek DOCSIS Certification*, SpecsNews from Cablelabs, Sept. 1998, at 3.

[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.

operator has petitioned the Commission for a determination of "effective competition."[797] If the Commission finds that a cable system is 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]

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[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), 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.

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, 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

[804]*See* Barron Petition at 9 and Exhibit H.

[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.

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*

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

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[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.

[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.

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]

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

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[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.

[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.

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]

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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[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 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

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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.

service for little 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 $27.49. BellSouth also offers one

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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.

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 apparently holding rates below what they would have

[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, *BellSouth 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).

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

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") Total	U.S. Television Households ("TH") Change From Previous Year	Homes Passed ("HP") Total	Homes Passed ("HP") Change From Previous Year	Basic Cable Subscribers ("Subs") Total	Basic Cable Subscribers ("Subs") Change From Previous Year	TV Households Passed by Cable (HP/TH)	TV Households Subscribing (Subs/TH)	U.S. Penetration (Subs/HP)
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%
39 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 Total	1995 Total	1995 % Change	1996 Total	1996 % Change	1997 Total	1997 % Change	1998 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 Sum Raised	Private Debt % of Total[1]	Public Debt[2] Sum Raised	Public Debt[2] % of Total	Private Equity Sum Raised	Private Equity % of Total	Public Equity Sum Raised	Public Equity % of Total	Total Capital Raised From Financing Sources[3]
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	10.15%.7	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.