

and ITFS frequencies has historically been the provision of video services, through this rulemaking use of these frequencies could be made available for other services.<sup>286</sup>

## 2. Local Multipoint Distribution Service

79. LMDS is a technology that uses microwave channels in the 28 GHz band to deliver multichannel video programming as well as two-way voice and data service.<sup>287</sup> With the exception of CellularVision's LMDS system in Brooklyn and Queens, New York, LMDS frequencies are not currently used to distribute video programming in the United States.<sup>288</sup> Industry observers note that the LMDS industry is moving towards the provision of numerous services, including video programming and two-way services like Internet access, high-speed data transmission and telephony.<sup>289</sup>

80. In July 1996, the Commission adopted a frequency band plan that allocated 1000 MHz of spectrum to LMDS and permitted LMDS systems, geostationary and non-geostationary Fixed Satellite Service ("FSS") systems, and feeder links for non-geostationary Mobile Satellite Service ("NGSO/MSS or Big LEO") systems to operate in the 28 GHz band.<sup>290</sup> This action was intended to promote competition by permitting these various services to develop and offer consumer services such as video program distribution, two-way interactive video, teleconferencing, telemedicine, telecommuting and high-speed data services within the U.S. and internationally.<sup>291</sup>

---

<sup>286</sup>*Two-Way NPRM* at ¶ 2.

<sup>287</sup>*In the Matter of Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, CC Dkt. No. 92-297, First Report & Order and Fourth Notice of Proposed Rulemaking ("*First LMDS Order*"), 11 FCC Rcd at 19005, 19010-19011 ¶¶ 14-15 (1996). "[The LMDS hub]...receivers operate in small cells, typically six miles in diameter, which transmit to and receive transmissions from subscriber locations. Because the cells are small, and arranged in a typical cellular pattern, a very high level of frequency reuse is possible. This pattern, combined with the availability of broadband microwave spectrum, results in sufficient capacity in the proposed LMDS system designs [to] offer [sic] services that compete both with local exchange carriers in the provision of local exchange service, and with cable operators in the provision of video programming even in urban areas." *First LMDS Order*, 11 FCC Rcd at 19010-19011 ¶¶ 14-15.

<sup>288</sup>This operation was authorized by the Commission in 1991 on a waiver basis. *Hye Crest Management, Inc. (For License Authorization in the Point-to-Point Microwave Radio Service in 27.5-29.5 GHz Band and Request for Waiver of the Rules)*, File No. 10380-CF-P-88, Memorandum Opinion & Order, 6 FCC Rcd 332 (1991). Other applications for LMDS service were subsequently frozen by the Commission. *1996 Report*, 12 FCC Rcd at 4393-4394 ¶ 65.

<sup>289</sup>WCAI Comments at 2; Douglas Smith, *Connecting the World Without Wires*, Private Cable & Wireless Cable, June 1997, at 71.

<sup>290</sup>*First LMDS Order*, 11 FCC Rcd at 19007-19008 ¶¶ 2-5.

<sup>291</sup>*Id.* at 19007 ¶ 3.

81. In the same order, the Commission proposed to allocate an additional 300 MHz of spectrum to LMDS at 31.0 - 31.3 GHz to provide greater technological flexibility for the industry.<sup>292</sup> However, the Commission's order prohibits cable companies and LECs from acquiring in-region LMDS licenses for three years. The order is currently under appeal.<sup>293</sup> The Commission plans to auction this LMDS spectrum block in February 1998.<sup>294</sup>

#### E. Satellite Master Antenna Television Systems

82. SMATV systems are MVPDs that primarily serve MDUs.<sup>295</sup> SMATV systems do not use public rights-of-way and, thus, fall outside of the Communications Act's definition of a cable system, and can operate without being subject to franchise requirements.<sup>296</sup> SMATV providers receive and process satellite signals directly at an MDU or other private property with an on-site headend facility consisting of receivers, processors and modulators, and distribute the programming to individual units through an internal hard-wire system in the building. SMATV operators often recover the relatively high fixed costs of operations (headend equipment, management, customer service, billing, installation and maintenance) through exclusive service contracts with the MDU owner. Under the 1996 Act, SMATV operators may use wires to connect separately-owned buildings so long as the wires do not use public rights-of-way.<sup>297</sup> This statutory change may permit significant SMATV system growth in areas where different owners' respective residential buildings can be interconnected without crossing public streets. Some SMATV systems have begun to use microwave transmissions to serve multiple buildings that are not commonly-owned without using public rights-of-way.<sup>298</sup>

---

<sup>292</sup>*Id.* at 19043 ¶ 95.

<sup>293</sup>*United States Telephone Association v. FCC*, Case No. 97-1368 (D.C. Cir. May 20, 1997). The USTA also noted its disagreement with the decision to prohibit LEC acquisition of in-region LMDS licenses in its comment in this proceeding. See USTA Comments at 5-6.

<sup>294</sup>FCC Public Notice, LMDS Auction Postponed Until February 18, 1998, FCC Postpones Auction No. 17, DA 97-2352, Report No. AUC-97-17-C (Auction No. 17) (rel. Nov. 10, 1997); FCC Auction Notice, *Auction of Local Multipoint Distribution Service*, DA No. 97-2081, Auction Notice and Filing Requirements for 986 Basic Trading Area ("BTA") Licenses in the 28 GHz and 31 GHz bands, Scheduled for December 10, 1997, Report No. AUC-97-17-A (Auction No. 17) (rel. Sept. 25, 1997).

<sup>295</sup>ICTA Facsimile, Nov. 12, 1997, at ¶ 1.

<sup>296</sup>1996 Act sec. 301(a)(2), 47 U.S.C. §522(7). SMATV operators are subject to significantly less regulatory oversight than are traditional cable television operators and, as a consequence, have greater flexibility with respect to service area, service content and pricing. For example, private cable and SMATV operators: (a) are not required to obtain cable television franchises; (b) do not face regulatory constraints on the geographic areas in which they may offer video services; (c) do not pay franchise and Federal Communications Commission subscriber fees; (d) are not obligated to pass every resident in a given area; (e) are not subject to rate regulation; and (f) are not subject to must carry and local government access obligations.

<sup>297</sup>*Id.* Prior to the 1996 Act, to qualify for this exception the buildings had to be under common ownership, control or management.

<sup>298</sup>1996 Report, 12 FCC Rcd at 4404-4405 ¶ 82.

83. SMATV systems have been the primary competitor to franchised cable systems for the MDU market. In 1991, regulatory changes made 18 GHz technology available for the point-to-point delivery of video programming services, thus permitting SMATV operators to enhance their systems and to become more efficient at the delivery of video programming to MDUs.<sup>299</sup> Firms using 18 GHz technology are known as enhanced SMATV systems and do not require the large networks of coaxial or fiber optic cable and amplifiers that are used by traditional hard-wire cable television operators or the installation of a headend facility at each MDU as is required for earlier SMATV systems.<sup>300</sup> Thus, SMATV operators using 18 GHz technology are able to provide services at attractive rates that make them competitive with franchised cable systems.<sup>301</sup>

84. *Growth.* ICTA notes that the SMATV industry is composed of hundreds of small and medium size firms throughout the nation.<sup>302</sup> The SMATV industry appears to have considerable growth potential and is becoming a more significant competitor to traditional cable service. There are approximately 28 million MDU units in the United States, housing more than one-fourth of the nation's total population.<sup>303</sup> The number of SMATV residential subscribers as of June 30, 1997, was estimated to be 1,162,500.<sup>304</sup> The number of SMATV subscribers in June 1997 represented a 3.2% increase over the 1,126,000 SMATV subscribers estimated in December 1996, while the December 1996 total

---

<sup>299</sup> *Amendment of Part 94 of the Commission's Rules to Permit Private Video Distribution Systems of Video Entertainment Access to the 18 GHz Band*, PR Dkt. No. 96-5, Report and Order ("*18 GHz Order*"), 6 FCC Rcd at 1270, 1275 n.11 (1991).

<sup>300</sup> *18 GHz Order*, 6 FCC Rcd at 1271-1272, 1275 n.11. Typically, an enhanced SMATV or private cable system operating in a stand-alone MDU requires an off-air antenna for receiving broadcast signals and two to three HSD or DBS antennas to receive satellite programming (depending upon the number of channels in the system). In the case of two adjoining MDUs, the SMATV system's antennas can serve both buildings by running a wire from the main building's antennas to the second building, assuming the transmission wire does not cross a public right-of-way. When the enhanced SMATV or private cable system antennas serve two or more MDUs that are not adjoining, the SMATV system uses an 18 GHz microwave transmission system to relay the programming to receiving antennas on the other MDUs. Telephone interview with Deborah Costlow, General Counsel, ICTA, Nov. 13, 1997.

<sup>301</sup> ICTA Comments at 5.

<sup>302</sup> *Id.* at 1.

<sup>303</sup> *Id.* at 2.

<sup>304</sup> See Table E-1. Commission staff estimated the number of SMATV subscribers for June 1997 based on information found in Paul Kagan Associates, Inc., *Private Cable Growth* (Chart), Private Cable Investor, July 31, 1997, at 3. However, the ICTA estimates the number of SMATV and private cable subscribers to be approximately 1.5 to 1.75 million subscribers. ICTA Facsimile, Nov. 12, 1997, at ¶ 3.

represented a 17.1% increase over the 962,000 subscribers estimated in December 1995.<sup>305</sup> Approximately 3,400 SMATV operators serve MDUs.<sup>306</sup> According to industry sources the growth markets for SMATV firms are in Texas, Florida, California, and Arizona, and major urban centers with large numbers of MDUs, such as Atlanta, Chicago, New York, and San Francisco.<sup>307</sup> Since our last report, system acquisitions have occurred in the SMATV industry. For example, OpTel, the largest SMATV operator, bought Phonoscope and TARA Systems, Inc., which raised OpTel's total subscribers from 121,100 to 147,500.<sup>308</sup>

85. *Technology.* Many SMATV operators are upgrading existing systems to 750 MHz HFC broadband architecture.<sup>309</sup> This architecture is capable of transmitting hundreds of channels using digital compression.<sup>310</sup> In addition, several firms have technologies that permit SMATV systems to deliver DBS, local off-air television signals and security services.<sup>311</sup> SMATV operators have employed enhanced microwave frequencies to link headends between widely separated MDUs.<sup>312</sup>

---

<sup>305</sup>See Table E-1.

<sup>306</sup>The number of SMATV operators is derived from information provided by ABC, Inc., Government Affairs, based on the number of ESPN Affiliates from the "apartment" (MDU) sector as of June 30, 1997. (The data cannot be compared with data from previous years due to different information sources.)

<sup>307</sup>Paul Kagan Associates, Inc., *OpTel 1996 Growth Curve*, Private Cable Investor, Dec. 31, 1996, at 3; *MTS Expansion Plans*, Private Cable Investors, Nov. 30, 1996, at 5; *1996 Report*, 12 FCC Rcd at 4403-4404 ¶ 81.

<sup>308</sup>Table D-1. Paul Kagan Associates, Inc., Private Cable Investor, Dec. 31, 1996, at 1-2; *News, CEA Announces Sale of Private Cable Systems*, Private Cable & Wireless Cable, June 1997, at 89; Joe Estrella, *Private Cable Giant Buys Houston MDUs*, Multichannel News, Sept. 8, 1997, at 47.

<sup>309</sup>David M. Conrad, *This Is Living! MDU Completes Step Into the Age of Bundling*, Private Cable & Wireless Cable, Aug. 1997, at 14; ICTA Facsimile, Nov. 12, 1997, at ¶ 2.

<sup>310</sup>In the *1996 Report*, we noted that industry analysts attributed the growth in SMATV systems to technical improvements which now make it profitable for operators to install SMATV systems in smaller MDUs. The result has been an increase in the overall number of systems, although many of these SMATV systems may serve only single MDUs. *1996 Report*, 12 FCC Rcd at 4403-4404 ¶ 81.

<sup>311</sup>*Foxcom Introduces MDU Satellite Distribution System*, Private Cable & Wireless Cable, Sept. 1997, at 38; Paul Kagan Associates, Inc., *Bridging the DBS Market*, Private Cable Investor, Nov. 30, 1996, at 6. For example, Global Communications and Heifner Communications have developed a transmission reception technology called a "Digi-SMATV." This technology integrates the DBS antenna and IRD receiver/decoder with a central frequency processor. Using this technology, subscribers can receive DBS and over-the-air digital and analog broadcast transmissions through an MDU's existing wiring. The system's developers cite its cost-efficiencies and flexibility, especially for smaller MDUs.

<sup>312</sup>ICTA Comments at 1, 5; Bob Berger, *The Road Ahead*, Private Cable & Wireless Cable, Mar. 1997, at 51; David M. Conrad, *This Is Living! MDU Completes Step Into the Age of Bundling*, Private Cable & Wireless Cable, Aug. 1997 at 14; Paul Kagan Associates, Inc., *Private Telephony Census*, Private Cable Investor, Dec. 31, 1996 at 2. SMATV systems use 18 GHz microwave facilities to link headends to rooftop antennas and to link buildings, which increases efficiencies. *1996 Report*, 12 FCC Rcd at 4404 ¶ 82; *18 GHz Order*, 6 FCC Rcd at 1271-1272, 1275 n.11.

86. *Special Features.* SMATV systems compete with the franchised cable operators to serve MDUs and MDU tenants.<sup>313</sup> Increasingly, SMATV operators offer a comprehensive, "one-stop" video programming and telecommunications service for subscribers as a way of adding value to the video services. Video services may include expanded channel offerings, multiplexed premium and numerous pay-per-view channels, special sports and special events packages, and NVOD, which may be unavailable from the local cable system;<sup>314</sup> telecommunications services may include high-tech security monitoring through closed circuit security cameras, interactive and Internet access, local and long-distance telephony along with voice mail, paging, calling cards, and other business services tailored to the particular needs of the building's tenants.<sup>315</sup>

87. *Programming Options.* SMATV operators have two options for purchasing programming. Many SMATV operators purchase programming through retail program packagers/distributors, such as World Satellite Network ("WSNET"), Showtime Networks, Inc., 4 Com and others, that assemble packages of satellite transmitted programming and resell them to the SMATV operators.<sup>316</sup> Other SMATV operators are contracting directly with satellite providers such as DIRECTV, Primestar, and Echostar to purchase video programming.<sup>317</sup>

88. *Combination Services.* DBS and SMATV operators are beginning to use combined technology to create a DBS/SMATV delivery system. Satellite providers such as DIRECTV/USSB, Primestar, and Echostar offer SMATV operators a low-cost, technically-advanced, digital programming service that significantly increases channel capacity and adds special programming that is otherwise

---

<sup>313</sup>ICTA Comments at 1-2.

<sup>314</sup>David M. Conrad, *This Is Living! MDU Completes Step Into the Age of Bundling*, Private Cable & Wireless Cable, Aug. 1997 at 14; Paul Kagan Associates, Inc., *Private Telephony Census*, Private Cable Investor, Dec. 31, 1996 at 2; *RCN New York City Expansion*, Private Cable Investor, June 30, 1997, at 3; *OnePoint's Full-Service-Market Entry*, Private Cable Investor, May 31, 1997, at 4; ICTA Comments at 5. As we noted in the *1996 Report*, some SMATV systems have added other advanced electronic features such as "picture-in-picture," "pick-and-pay" (or pay-per-view programming), interactive games and video-on-demand ("VOD") programming as part of their "custom-designed" programming packages for subscribers. *1996 Report*, 12 FCC Rcd at 4405 ¶ 83.

<sup>315</sup>David M. Conrad, *This Is Living! MDU Completes Step Into the Age of Bundling*, Private Cable & Wireless Cable, Aug. 1997, at 14; Paul Kagan Associates, Inc., *Private Telephony Census*, Private Cable Investor, Dec. 31, 1996, at 2; *OnePoint's Full-Service-Market Entry*, Private Cable Investor, May, 31, 1997, at 4; Joe Estrella, *Private Cable Giant Buys Houston MDUs*, Multichannel News, Sept. 8, 1997, at 47. *1996 Report*, 12 FCC at Rcd 4405-4406 ¶ 83.

<sup>316</sup>Tanya J. Fluette, *Programming Prenuptials*, Private Cable & Wireless Cable, Aug. 1997, at 24; Paul Kagan Associates, Inc., *World Satellite Network, Heifner Communications Merge*, Private Cable Investor, June 30, 1997, at 5; *Programming, Showtime Restructures DTH Division*, Private Cable & Wireless Cable, Aug. 1997, at 40.

<sup>317</sup>ICTA Facsimile, Nov. 12, 1997, at ¶ 4; Paul Kagan Associates, Inc., Private Cable Investor, June 30, 1997, at 1; *DIRECTV Signs Nationwide MDU Distribution Agreement*, Private Cable & Wireless Cable, Sept. 1997, at 45; *Digital Transport Pacts*, Private Cable Investor, Dec. 31, 1996 at 5; *Comm Daily Notebook*, Comm. Daily, Sept. 16, 1997; *1996 Report*, 12 FCC Rcd at 4404-4405 ¶ 82.

unavailable from cable systems or MMDS operators.<sup>318</sup> Because of these features, even program packagers such as WSNET are contracting with DBS providers and then reselling these services to their SMATV subscribers.<sup>319</sup> SMATV providers may realize significant savings by avoiding plant and equipment investment.<sup>320</sup> In particular, this arrangement makes serving smaller MDUs with fewer than 100 units profitable.<sup>321</sup> However, despite its advantages, some SMATV operators have expressed concerns that using a DBS provider may limit their programming choices and the flexibility to customize programming and other services for their tenants.<sup>322</sup>

89. *Real Estate Owners and Property Managers.* In the last two years, Real Estate Investment Trusts ("REITs")<sup>323</sup> and other national property management companies and ownership groups, with numerous interstate property holdings, have begun to negotiate programming and other MVPD services on a national basis. This recent trend has "nationalized" a traditionally community-oriented and often individualistic business environment. National bargaining for video programming services may permit real estate companies to negotiate advantageous programming arrangements and services for their properties.<sup>324</sup>

#### F. Broadcast Television Service

90. Broadcast networks and stations are competitors to other MVPDs in the advertising and program acquisition markets. Additionally, broadcast networks and stations are suppliers of content for

---

<sup>318</sup>Paul Kagan Associates, Inc., *Private Cable Investor*, June 30, 1997, at 1; *DIRECTV Signs Nationwide MDU Distribution Agreement*, *Private Cable & Wireless Cable*, Sept. 1997, at 45; *Digital Transport Pacts*, *Private Cable Investor*, Dec. 31, 1996 at 5; Paul Kagan Associates, Inc., *TelQuest Revised Transport Plan*, *Private Cable Investor*, June 30, 1997, at 2; Monica Hogan, *TSAT Outlines PrimeStar's High-Power Plans*, *Multichannel News*, Aug. 18, 1997 at 10, 61.

<sup>319</sup>Tanya J. Fluette, *A Decade of Difference, SBCA Celebrates Ten Years of Service*, *Private Cable & Wireless Cable*, Sept. 1997, at 40; *DIRECTV Signs Nationwide MDU Distribution Agreement*, *Private Cable & Wireless Cable*, Sept. 1997, at 45.

<sup>320</sup>Lori Parker, *Tapping the Potential, DBS Offers Solutions to Private Cable Operators*, *Private Cable & Wireless Cable*, July 1997, at 8-9; *EchoStar Talking to MMDS Operators*, *Private Cable Investor*, Nov. 30, 1996 at 7; *SkyView To Deliver DIRECTV Nationwide*, *Private Cable Investor*, Dec. 31, 1996 at 8; July 31, 1997, at 1.

<sup>321</sup>Lori Parker, *Tapping the Potential, DBS Offers Solutions to Private Cable Operators*, *Private Cable & Wireless Cable*, July 1997, at 8-9; *EchoStar Talking to MMDS Operators*, *Private Cable Investor*, Nov. 30, 1996 at 7; *SkyView To Deliver DIRECTV Nationwide*, *Private Cable Investor*, Dec. 31, 1996 at 8; July 31, 1997, at 1.

<sup>322</sup>David M. Conrad, *This Is Living! MDU Completes Step Into the Age of Bundling*, *Private Cable & Wireless Cable*, Aug. 1997, at 14.

<sup>323</sup>A real estate investment trust ("REIT") is essentially a corporation or business trust that combines the capital of many investors to acquire or provide financing for all forms of real estate. *Frequently Asked Questions, What Is a REIT?* The National Association of Real Estate Investment Trusts, at <http://www.narcit.com/faqs.html#quest1>.

<sup>324</sup>US West Comments at 13-14.

distribution by MVPDs.<sup>325</sup> During 1997, the broadcast industry experienced important changes, especially in the area of technological developments.

91. Since the *1996 Report*, the broadcast industry has seen continued growth in the number of operating stations and in advertising revenues. The number of commercial and noncommercial television stations increased to 1561 as of July 31, 1997, from 1550 as of August 31, 1996.<sup>326</sup> Broadcast total advertising revenues reached \$31.3 billion in 1996, a 12% increase over 1995.<sup>327</sup> Advertising revenues for the six broadcast networks alone reached \$14.7 billion in 1996.<sup>328</sup> In comparison, cable programming networks received an estimated \$4.9 billion in advertising revenue in 1996, an increase of 21% over 1995.<sup>329</sup>

92. Broadcast station share of total television viewing declined, however, as a result of cable and other MVPD competition, but it still attracts a large majority of the television audience.<sup>330</sup> During the 1996-1997 television season, the four major networks (i.e., ABC, CBS, Fox, and NBC) accounted for a combined 59% share of prime time viewing among all television households (compared to 62% in the previous year); UPN and WB, the two newest networks, achieved a combined 9% share of prime time viewing, the same as last year.<sup>331</sup> The most recent data available for households subscribing to cable service indicates that, even in cable homes, programming originating on local broadcast television stations accounted for a combined 60% share of all day viewing in the 1995-96 television season, while non-premium cable networks and pay cable services achieved a combined 51% share of all day viewing.<sup>332</sup>

93. The 1996 Act directed the Commission to eliminate the restrictions on the number of television stations a person or entity may own or operate nationwide, and to increase the national audience

---

<sup>325</sup>See *1995 Report*, 11 FCC Rcd at 2113-15 ¶¶ 112-115.

<sup>326</sup>Compare Federal Communications Commission, *Broadcast Station Totals as of July 31, 1997*, FCC Public Notice (Aug. 29, 1997) with Federal Communications Commission, *Broadcast Station Totals as of August 31, 1996*, FCC News Release (Sept. 10, 1996).

<sup>327</sup>The Television Bureau of Advertising ("TVB") supplied this data to the Commission on October 3, 1997, which is based on information gathered from the Competitive Media Reporting's MediaWatch Service.

<sup>328</sup>*Id.* This figure represents sales for ABC, CBS, Fox, NBC, UPN and WB. In 1995, TVB reported advertising revenues for the four major networks (ABC, CBS, Fox and NBC) of \$12.4 billion and estimated that UPN received \$250 million for advertising in 1995, and that WB received \$65 million.

<sup>329</sup>Paul Kagan Assocs., Inc., *Cable TV Advertising*, Nov. 30, 1996, at 3.

<sup>330</sup>*People's Choice: Ratings According to Nielsen, Sept. 15-21*, *Broadcasting & Cable*, Sept. 29, 1996, at 60.

<sup>331</sup>*Id.*

<sup>332</sup>National Cable Television Assoc., *Viewing Shares: Broadcast Years 1985/1986-1995/1996*, *Cable Television Developments*, Spring 1997, at 5 (citing A.C. Nielsen Co. statistics). Reported audience shares exceed 100% due to multiple set viewing.

reach limitations to 35%.<sup>333</sup> The Commission did this in March 1996.<sup>334</sup> Acquisitions subsequent to these rules resulted in consolidation of television station ownership.<sup>335</sup> An initial wave of consolidation mainly involved stations in the top media markets.<sup>336</sup> More recently, consolidations have occurred in small and mid-sized markets.<sup>337</sup> Overall, the number of television station owners dropped 21% to 475 in 1996 from 600 in 1995.<sup>338</sup>

94. Significant developments in the broadcast field concerning Digital Television ("DTV") also occurred during the past year. In December 1996, the Commission adopted a DTV standard,<sup>339</sup> and, in 1997, issued two decisions concerning implementation of DTV service: (a) the *Fifth Report and Order* establishing service rules for DTV and limits on broadcasters' conversion to DTV;<sup>340</sup> and (b) the *Sixth Report and Order* setting out a table of allotments for DTV channels and assignments of spectrum for

---

<sup>333</sup> 1996 Act § 202(c)(1), requiring the Commission to modify its rules set forth in § 73.3555 (47 C.F.R. 73.3555). See also *Review of the Commission's Regulations Governing Television Broadcasting: Television Satellite Stations Review of Policy and Rules*, MM Dkt. Nos. 91-221 & 87-7, Second Further Notice of Proposed Rule Making, 11 FCC Rcd at 21656-57 ¶ 2 (1996).

<sup>334</sup> See *Implementation of Sections 202(c)(1) and 202(e) of the Telecommunications Act of 1996 (National Broadcast Television Ownership and Dual Network Operations)*, Order, 11 FCC Rcd at 12374 (1996).

<sup>335</sup> *Television's Revamped Leadership*, Broadcasting & Cable, June 30, 1997, at 30-41, and Steve McClellan, *Bud Paxson Sets His Sights To Be Lucky Number 7*, Broadcasting & Cable, June 30, 1997, at 42-45.

<sup>336</sup> *Id.*

<sup>337</sup> For example, the investment and broadcast firm Hicks, Muse, Tate & Furst is attempting to consolidate its station ownership in small and mid-sized cities. Hicks is in the process of making a \$1.7 billion deal to buy Lin Television, formerly the 22nd largest station owner with holdings almost exclusively in mid-sized markets, and is buying or making deals to buy seven additional stations in small and mid-sized markets. David Lieberman, *Small Cities Are TV Targets*, USA Today, Aug. 14, 1997, at 3B. The article posits that the moves by Hicks may be the start of a second wave of consolidation in station ownership in small and mid-sized cities where the station prices are lower. Lin Television has subsequently received a larger buy-out offer from Raycom (*New Offer Confirmed for Lin Television*, New York Times, Oct. 21, 1997, at D9), which was subsequently topped by Hicks with the aid of NBC (Allen R. Myerson, *Hicks, Muse, Aided by NBC, Sweetens Lin Television Bid*, New York Times, Oct. 23, 1997, at D8).

<sup>338</sup> BIA Companies, *TV Station Ownership Consolidates 21% As Telecom Act Takes Effect* (press release), Aug. 13, 1997, at 1. BIA is a consulting and research company which specializes in the television, radio, and telecommunications industries.

<sup>339</sup> *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Dkt. No. 87-268, Fourth Report and Order ("*Fourth Report and Order*"), 11 FCC Rcd at 17771 (1996). See also *Technical Standards for Digital Television*, MM Dkt. No. 87-268, Public Notice, 11 FCC Rcd at 16736 (1996).

<sup>340</sup> *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Dkt. No. 87-268, Fifth Report and Order ("*Fifth Report and Order*"), 12 FCC Rcd at 12810 (1997).

DTV for each broadcast station.<sup>341</sup> Under the DTV construction schedule set out in the *Fifth Report and Order*, which is intended to ensure the preservation of a universally available local television broadcasting service and the swift recovery of analog broadcast spectrum, affiliates of the top four networks in the top ten markets are required to be on the air with digital signals by May 1, 1999.<sup>342</sup> Certain volunteer stations in the top ten markets will be on the air by November 1998. Affiliates of the top four networks in markets 11 through 30 must be on the air by November 1, 1999. This schedule provides that more than half of all television households could have access to DTV signals provided by multiple local stations by November 1, 1999.<sup>343</sup> All other commercial stations are required to construct their DTV facilities by May 1, 2002, and all noncommercial stations must construct their DTV facilities by May 1, 2003.<sup>344</sup> Subject to biennial review as required by Section 202(h) of the 1996 Act and Section 11 of the Communications Act, as amended, and to certain statutory exceptions, the current target date for all stations' return of their analog spectrum is 2006.<sup>345</sup>

95. DTV has the potential to allow the broadcasters to become more effective competitors with cable companies in the MVPD market. Unlike the other delivery technologies discussed in this report, broadcast television stations currently provide one channel of video programming. Once broadcast television stations convert from analog to digital television, however, they will have an option to offer multiple channels of video service during all or part of the broadcast day. The Commission requires provision of one free, over-the-air broadcast signal of at least comparable resolution to today's service.<sup>346</sup> 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 a combination of the two. Some broadcasters have proposed that they combine the digital spectrum of all stations in a local television market to create a 40

---

<sup>341</sup> *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Dkt. No. 87-268, Sixth Report and Order ("*Sixth Report and Order*"), FCC 97-115 (rel. Apr. 21, 1997) summarized at 62 Fed. Reg. 26684 (May 14, 1997).

<sup>342</sup> *Fifth Report and Order*, 12 FCC Rcd at 12840-41 ¶ 76.

<sup>343</sup> *Id.*

<sup>344</sup> *Id.* Twenty-four television stations have voluntarily agreed to an 18-month schedule for the construction of their DTV facilities.

<sup>345</sup> *Id.* at 12850-51 ¶¶ 99, 100. See also Balanced Budget Act of 1997 ("BBA"), Pub. L. 105-33, 111 Stat. 251 (1997) (codified at 47 U.S.C. § 309(j)(14)(A)-(B)) (establishing statutory target date for return of the analog spectrum and setting out exceptions to that deadline).

<sup>346</sup> See *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Dkt. No. 87-268, Further Notice of Proposed Rulemaking and Third Notice of Inquiry, 10 FCC Rcd 10540 (1995); *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, MM Dkt. No. 87-268, Fifth Further Notice of Proposed Rule Making, 11 FCC Rcd 6235 (1996). HDTV signals will be of much higher quality than current broadcasts, with digital picture and CD-quality sound. SDTV broadcasts also have the potential to be of higher quality, depending on the number of channels broadcast, and the quality of compression technology.

to 50 channel service that could compete with MVPDs.<sup>347</sup> At this time, however, it is unclear how DTV will develop as a broadcast service for consumers.<sup>348</sup> 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.

96. We reported on two experimental HDTV stations in the *1996 Report*.<sup>349</sup> These stations continue their tests. One station, KITV in Honolulu, announced that it planned to begin commercial DTV broadcasts on December 1, 1997, if all permits were received. These permits were received, but KITV has not announced that it has begun these broadcasts. KITV and its satellite stations in Hawaii will offer an as-yet undetermined mix of HDTV and multicast SDTV.<sup>350</sup> WBTB in Charlotte, North Carolina, received a construction permit on October 2, 1997.<sup>351</sup> As of December 31, 1997, seven DTV construction permits have been granted, including the four listed above.<sup>352</sup> No station, however, has begun commercial DTV broadcasts.<sup>353</sup> In previous reports, we also noted that low power television ("LPTV") stations can

---

<sup>347</sup>Fred Dawson, *Digital TV Picture Remains a Muddle*, Multichannel News, Aug. 18, 1997, at 1, 64 (referring, in part, to Sinclair Broadcasting's plan in Baltimore, Maryland); John Higgins, *HDTV Falling Out of Favor*, Broadcasting & Cable, Aug. 18, at 4 (noting that five broadcasters in Atlanta could create a 15-24 channel wireless cable system).

<sup>348</sup>There are a number of factors that will affect the development of DTV, including logistical and resource issues regarding the construction and modification of television towers, the cost of conversion of station facilities and the manufacture and availability of television sets with DTV capability. See, e.g., Jennifer Clarson, *DTV Timetable Turns Screws on Tower Build-Out*, Television Broadcast, July 1997, at 1; *Hype Definition Waiting for HDTV? Don't Go Dumping Your Old Set Just Yet, Promise of Digital Television Is Fading as Broadcasters Complain About Costs*, Wall Street Journal, Sept. 12, 1997, at A1; and Joel Brinkley, *3 Networks, Set Makers In Standoff Over HDTV*, New York Times, Aug. 29, 1997, at C1.

<sup>349</sup>*1996 Report*, 12 FCC Rcd at 4409 n. 298.

<sup>350</sup>See *Hawaiian Stations to Launch DTV Broadcasting Dec. 1*, Comm. Daily, Aug. 19, 1997, at 3. KITV in Honolulu has two satellite stations, KMAU in Wailuku and KHVO in Hilo, which will begin DTV broadcasts simultaneously. KITV converted to DTV early because it was undertaking a major upgrade of its facilities anyway. The Station's General Manager also stated that he believed DTV would improve signal transmission, which has been poor in the past due in part to Hawaii's mountainous terrain. These stations received their construction permits as follows: KHVO-DT in Hilo, Channel 18, BPCDT-970821KE (Sept. 3, 1997); KITV-DT in Honolulu, Channel 40, BPCDT-970808KE (Sept. 4, 1997); KMAU-DT in Wailuku, Channel 29, BPCDT-970808KF (Oct. 21, 1997).

<sup>351</sup>WBTB-DT in Charlotte, North Carolina, Channel 23, BPCDT-970919KE (Oct. 2, 1997). See also *Mass Media*, Comm. Daily, Oct. 9, 1997.

<sup>352</sup>The others are: KHOU-DT in Houston, Texas, Channel 31, BPCDT-971016KE (Oct. 27, and WSB-DT in Atlanta, Georgia, Channel 39, BPCDT-971020KE (Nov. 21, 1997), and WCBS-DT, New York, New York, Channel 56, BPCDT-971103KE (Dec. 17, 1997).

<sup>353</sup>See, e.g., Joel Brinkley, *Under Pressure, 2 Broadcasters Decide They Will Now Run HDTV*, New York Times, Sept. 18, 1997, at D1 (regarding reconsideration by ABC and Sinclair Broadcasting of their earlier announced plans to offer multiple channels of SDTV rather than HDTV); Steve McClellan and Glen Dickson, *CBS and Affiliates Talk Digital*, Broadcasting & Cable, Oct. 6, 1997, at 17 (noting a planned meeting between CBS and its affiliates to discuss how much HDTV the network plans to offer and to what extent it will broadcast multichannel signals).

offer multichannel video programming services on a subscription basis and that such service exists in two areas.<sup>354</sup> We also noted that such service remains extremely limited and does not appear to have a significant impact on competition in the video market.<sup>355</sup> No further applications for LPTV multichannel video programming services construction permits or requests to begin service have been filed in the last year.

## G. Other Entrants

### 1. Internet Video

97. In the past two reports, we noted that software is currently available that makes real-time and downloadable audio and video from the Internet available to a personal computer.<sup>356</sup> We also reported another mechanism for PC-based video delivery for Java-enabled browsers.<sup>357</sup> Over the past year, additional technologies for Internet video have emerged. WebTV<sup>358</sup> recently announced plans to provide television/Internet interactivity or "hyperlinking"<sup>359</sup> and video viewing over the Internet through WebTV-specific technologies,<sup>360</sup> and WorldGate has announced similar plans based on different technologies.<sup>361</sup> Video over the Internet, however, is not comparable in quality to broadcast video provided by MVPDs, and it is unclear whether the needed improvements will be made to make video service over the Internet a viable competitor.

---

<sup>354</sup> 1996 Report, 12 FCC Rcd at 4410 ¶ 94.

<sup>355</sup> *Id.*

<sup>356</sup> 1995 Report, 11 FCC Rcd at 2121 ¶ 127, and 1996 Report, 12 FCC Rcd at 4412-13 ¶ 99. This year, several other companies offer notable software packages including SummerSoft's<sup>®</sup> V-Fone for video conferencing, WebCam for placing video content on the Internet, and V-Play for viewing video content on the Internet (See <http://www.summersoft.com/>); Internet Video Services, Inc.'s netStream™ for streaming video and netvideo™ for downloadable video; and Cinecom Corporation's Cine Video/Direct and Cine Video Director for PC-to-PC live video (See <http://www.cinecom.com>).

<sup>357</sup> Java™ is a computer language/platform developed and licensed by Sun Microsystems, Inc. OnlineTV offers regularly scheduled content on the Internet through its Web site to anyone with a Java enabled browser. See OnlineTV Corp., <http://onlinetv.com/>.

<sup>358</sup> WebTV Networks is subsidiary of the Microsoft Corporation.

<sup>359</sup> "Hyperlinking" is the process by which a television viewer can instantly access an advertiser's or programmer's related Web site or product order form through the single touch of a remote control button. Warren Publishing, *Cable Systems Ready for Commercial Launch of Competitor to WebTV*, Comm. Daily, Sept. 16, 1997, at 4.

<sup>360</sup> David Bank, *Microsoft's WebTV Unit to Introduce Process That Uses Web to Enhance TV*, The Wall Street Journal, Sept. 15, 1997 at B2.

<sup>361</sup> *Id.*

98. Last year we reported that delivery of video programming over the Internet was inhibited by the limited bandwidth and transmission delays of the Internet.<sup>362</sup> This continues to be the case. While computer and Internet related hardware and software continue to improve, transmission rates vary depending on a number of factors, including bandwidth, speed of various servers on the Internet, number of users, and capacity of the equipment receiving the data.

99. Despite the relative weakness of PC-based video provision over the Internet, many companies are upgrading and marketing software that renders video delivery to a computer through an Internet connection.<sup>363</sup> The primary purpose of most of these software packages is for business use (e.g., video conferencing and business promotion), although video programming use of the Internet is starting to emerge. The two primary modes of PC-based delivery are: (a) downloading a video file for later playback; and (b) streaming.

100. Downloading for future playback is one of the most widely used methods of providing video to the Internet user. While compression techniques used in this process significantly reduce the size of the video file, a typical consumer will expend considerably more time downloading the file than it will take to "play" it.<sup>364</sup> The time to download a file depends on a number of factors, including: (a) the speed of the Internet connection; (b) how busy the server sending the video file is; and (c) the size of the video file.

101. "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; however, the quality of the video is not as good or as reliable as MVPD service. Currently there are 20,000 hours of audio and video streaming available on the Internet each week.<sup>365</sup>

102. *WebTV and WorldGate.* WebTV and WorldGate are developing technologies for combining the use of Internet data and traditional video programming delivery service. In September 1997, WebTV announced plans to improve its current delivery of conventional Web pages to television sets to include a tuner that enables television shows to be viewed from within Web pages and circuitry and allows the tuner to receive digital data over cable or broadcast television signals. Until now, WebTV's digital data was transmitted over telephone lines, but the announced improvements will permit users to download digital data through existing cable or broadcast technology, though users must use

---

<sup>362</sup>1996 Report, 12 FCC Rcd at 4412-13 ¶ 107.

<sup>363</sup>See fn. 356 *supra*.

<sup>364</sup>The downloaded file resides on the hard disk of the user's computer. The video file must be downloaded entirely before it can be played using an appropriate player or helper application.

<sup>365</sup>Presentation by Phil Barrett, of Progressive Networks, at the Cross-Industry Working Team meeting, Princeton, New Jersey, Aug. 6, 1997. See also <http://www.real.com/corporate/index.html>.

phone lines to send messages.<sup>366</sup> The RCA division of Thomson, SA has launched a product similar to WebTV which merges television, the World Wide Web, and e-mail features.<sup>367</sup> Also, WorldGate has announced plans for a similar product which, instead of an upstream telephone connection, will use advanced analog or digital set-top boxes to provide full, two-way Internet and Web access over cable television networks using the television as a display device.<sup>368</sup>

## 2. Home Video Sales and Rentals

103. Premium and pay-per-view cable services are not regulated because they are competitive.<sup>369</sup> As discussed in previous reports, 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.<sup>370</sup> It is estimated that 88% of all U.S. television households own at least one VCR.<sup>371</sup> In 1996, the U.S. video cassette rental and sales market had an estimated \$15.6 billion in revenue, having grown from \$9.8 billion in revenue in 1990. 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.<sup>372</sup> As a comparison, the combined total spending for similar products distributed by cable television, satellite, and other MVPD pay television services was \$7.2 billion in 1996.<sup>373</sup>

104. The video retail industry is highly competitive with supermarkets, pharmacies, convenience stores, bookstores, mass merchants, mail order operations and other retailers involved in video tape sales or rentals. In 1996, there were approximately 27,000 video specialty stores in the U.S. selling or renting

---

<sup>366</sup>David Bank, *Microsoft's WebTV Unit to Introduce Process That Uses Web to Enhance TV*, Wall Street Journal, Sept. 15, 1997, at B2.

<sup>367</sup>RCA's product is based on a design from NetworkComputer, Inc., a unit of Oracle Corporation which uses programming from NetChannel, Inc. David Bank, *Microsoft's WebTV Unit to Introduce Process That Uses Web to Enhance TV*, Wall Street Journal, Sept. 15, 1997, at B2.

<sup>368</sup>WorldGate also allows for hyperlinking which permits the television viewer to instantly access, remotely, the Web site of an advertiser currently on the television. *Cable Systems Ready for Commercial Launch of Competitor to WebTV*, Comm. Daily, Sept. 16, 1997, at 4.

<sup>369</sup>See House Committee on Energy and Commerce, H.R. Rep. No. 623, 102d Cong., 2nd Sess. (1992) at 90.

<sup>370</sup>*Competition, Rate Deregulation and the Commission's Policies Relating to the Provision of Cable Television Service*, MM Dkt. N., 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.

<sup>371</sup>*Consumer Electronics & the U.S. Economy*, Consumer Electronics Manufacturers Association, 1996.

<sup>372</sup>Hollywood Entertainment Corp., Filing Pursuant to Rule 424(b)(3) (filed Sept. 25, 1997), SEC File No. 333-35351 ("Hollywood Filing"). 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.

<sup>373</sup>Veronis, Suhler & Associates, *The Veronis, Suhler & Associates Communications Industry Forecast* 184 (1997).

video tapes.<sup>374</sup> A large video tape store may carry as many as 10,000 titles, including multiple copies of the more popular titles.<sup>375</sup>

105. To maximize revenue, studios have a strategy of sequential release, providing each distribution channel the rights to movies for a limited time before making them available to the next distribution channel.<sup>376</sup> These distribution channels generally include, in release date order, movie theaters, video retail stores, pay-per-view television, including DBS and pay cable television, and, finally, network and syndicated television.<sup>377</sup> The studios determine the sequential order in which they release movies to each distribution channel based upon the order they believe will maximize their total revenue from all distribution channels combined.<sup>378</sup> For example, movie studios have generally licensed their films first to the broadcast television networks and then to basic cable television networks since the cable networks usually pay less than the broadcast networks.<sup>379</sup> Recently, however, cable networks, such as TNT, have obtained the rights to show major movies prior to their distribution to broadcast television and are paying rates comparable to those paid by the broadcast networks.<sup>380</sup> Changes in the manner in which movies are marketed, including the release cycle of movie titles to pay-per-view, DBS, cable television, or other distribution channels, could change the relative competitiveness of these technologies. Existing pay-per-view services, moreover, offer a limited number of channels and movies. Changes in technology, including digital compression technology, are expected eventually to permit cable companies, DBS companies, telephone companies, and other telecommunications companies to become more competitive with the home video sales and rental industry as they are able to transmit a larger number of movies to homes at more frequently scheduled intervals or on demand.

106. In the last year, Digital Versatile Disc ("DVD") technology has become available for consumers.<sup>381</sup> DVD players are used in conjunction with a television set to view movies. DVD formatted movies can also be viewed on personal computers. The discs are similar in size to compact discs ("CDs"), offer better picture and audio quality than video cassettes, and are more durable than videotape. The additional information storage capacity of DVDs permits multiple screen formats, including the original theatrical widescreen version. An interactive on-screen menu allows DVD users to switch between

---

<sup>374</sup>Hollywood Filing.

<sup>375</sup>*Id.* Hollywood Entertainment cites statistics for its typical Hollywood Video store.

<sup>376</sup>*Id.*

<sup>377</sup>*Id.*

<sup>378</sup>*Id.*

<sup>379</sup>Geraldine Fabrikant, *Time Warner is Licensing 12 Films to Cable Outlets*, New York Times, Jan. 16, 1997, at D10.

<sup>380</sup>*Id.* See also Eben Shapiro, *Turner to Premiere First-Run Movies on Cable Network*, Wall Street Journal, Jan. 16, 1997, at B11 (indicating that the Turner Broadcasting unit of Time Warner paid "network" rates for a 12-picture deal after the broadcast networks had an opportunity to bid on the movies).

<sup>381</sup>Joel Brinkley, *It's a Made for Television Controversy*, New York Times, Oct. 15, 1997, at D1. For additional information, see also 1995 Report, 11 FCC Rcd at 2119 ¶ 122.

multiple language tracks and subtitles, to watch the original theatrical trailer and to explore material about the cast, director and making of the film.<sup>382</sup> DVD players entered the marketplace in February 1997, although DVD with recording capability is not expected until 1998.<sup>383</sup> DVD players range in price from \$499<sup>384</sup> to \$5000.<sup>385</sup> More than 50 titles have been released in this format at an approximate cost of \$25 each.<sup>386</sup> In September 1997, Circuit City announced plans to introduce Divx, 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.<sup>387</sup> Divx versions of movies are expected to cost \$5. The consumer will be able to view the movie for a 48-hour period after it is first played. After that time, the consumer will have to pay an additional fee for another 48-hour viewing period.<sup>388</sup>

### 3. *Interactive Video and Data Service*

107. The interactive video and data service ("IVDS") is a point-to-multipoint, multipoint-to-point, short distance communication service.<sup>389</sup> An IVDS licensee may transmit information, product, and service offerings to its subscribers and receive interactive responses.<sup>390</sup> Although the IVDS channel width is insufficient for the transmission of conventional full motion video, IVDS services were initially planned

---

<sup>382</sup>Warner Home Video Web site, <http://207.155.85.62/store/faq.tam>.

<sup>383</sup>Veronis, Suhler & Associates, Communications Industry Forecast, *Filmed Entertainment*, at 201.

<sup>384</sup>Warner Home Video Web site, <http://207.155.85.62/store/faq.tam>.

<sup>385</sup>Veronis, Suhler & Associates, Communications Industry Forecast, *Filmed Entertainment*, at 201.

<sup>386</sup>*Id.*

<sup>387</sup>Joel Brinkley, *It's a Made for Television Controversy*, New York Times, Oct. 15, 1997, at D1; Jerry Knight, *Coming to a TV Near You: The Disposable Video Disc*, Washington Post Business Section, Oct. 6, 1997, at 5.

<sup>388</sup>*Id.*

<sup>389</sup>The Commission established a frequency allocation at 218-219 MHz for IVDS in 1992, allowing a 500 kilohertz frequency segment to two licensees in each of the 734 cellular-defined service areas (306 Metropolitan Statistical Areas ("MSAs") and 428 Rural Service Areas ("RSAs")). *Amendment of Parts 0, 1, 2 and 95 of the Commission's Rules to Provide Interactive Video and Data Services*, GEN Docket No. 91-2, Report and Order, 7 FCC Rcd 1630, 1630-33 (1992), *on recon.*, Memorandum Opinion and Order, 7 FCC Rcd 4923 (1992), *further recon.*, Second Memorandum Opinion and Order, 8 FCC Rcd 2787 (1993). The first 18 IVDS system licenses (covering nine of the top ten MSAs) were awarded by lottery held in September 1993. Public Notice, Mimeo No. 42412 (rel. March 30, 1994). These licenses were granted in March 1994. The Commission auctioned the remaining 594 MSA IVDS licenses in July 1994. Public Notice, Mimeo No. 44160 (rel. Aug. 2, 1994), *erratum*, Public Notice, Mimeo No. 44265 (rel. August 9, 1994). For Commission's competitive bidding authority, see 47 U.S.C. § 309(j). Licenses have been granted to all of the IVDS auction bidders that satisfied the applicable payment deadlines. See Public Notice, DA 95-152 (rel. Feb. 8, 1995); News Release, Mimeo No. 51403 (rel. Dec. 29, 1994). The regulations governing IVDS are codified at 47 C.F.R. §§ 95.801-.863.

<sup>390</sup>Mobile operation is permitted. See 47 C.F.R. § 95.805(e).

as interactive text-based supplements for the use of television viewers.<sup>391</sup> Recently, however, non-IVDS technologies have developed some of these same supplementary, interactive, text-based services,<sup>392</sup> and IVDS firms are considering using their IVDS spectrum rights to provide telemetry services, such as remote meter reading, vending machine inventory control, and cable television theft deterrence. IVDS licensees may develop other applications consistent with the Commission's rules without Commission approval.<sup>393</sup>

#### H. Local Exchange Carriers

108. In the *1995* and *1996 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.<sup>394</sup> This is still true. To date, LECs represent a competitive presence in a small (although growing) number of markets for the delivery of video programming. LEC entry into video distribution, however, has proceeded sporadically and has been highly dependent on the business strategies of the individual companies involved.

109. As we noted in the *1996 Report*,<sup>395</sup> 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,<sup>396</sup> (2) provide transmission of video programming on a common carrier basis under Title II of the Communications Act,<sup>397</sup> (3) provide video programming as a cable system under Title VI of the Communications Act,<sup>398</sup> or (4) provide video programming by means of an open video system.<sup>399</sup>

---

<sup>391</sup>At this time, it appears that there are very few IVDS services in operation.

<sup>392</sup>WebTV, Wink and WavePhore are examples of firms offering text-based interactive television services which encompass, or are similar to, those originally envisioned by potential IVDS providers.

<sup>393</sup>The Commission had scheduled a second IVDS auction for February 1997 to award licenses in the 428 RSAs and in the MSAs for which bidders in the first auction did not satisfy applicable payment deadlines. In January 1997, however, the Commission postponed the auction in order to "consider a petition for rulemaking and numerous informal requests of potential bidders and license holders seeking to obtain additional flexibility for the service." Public Notice, DA 97-209, Report No. AUC-96-13-E (rel. Jan. 29, 1997). The Commission is currently considering requests to extend the IVDS license term from five to ten years, and to allow the same entity to own or control both IVDS licenses in a single market.

<sup>394</sup>*1995 Report*, 11 FCC Rcd at 2110 ¶ 103, *1996 Report*, 12 FCC Rcd at 4394 ¶ 67.

<sup>395</sup>*1996 Report*, 12 FCC Rcd at 4395 ¶ 68.

<sup>396</sup>47 U.S.C. § 571(a)(1).

<sup>397</sup>47 U.S.C. § 571(a)(2).

<sup>398</sup>47 U.S.C. § 571(a)(3).

<sup>399</sup>47 U.S.C. § 571(a)(3)-(4).

### 1. *Current and Planned LEC Video Delivery*

110. *MMDS*. SBC Communications, through its Pacific Bell Video Services subsidiary (herein referred to as "SBC"), and BellSouth are the largest LEC investors in MMDS licenses and systems.<sup>400</sup> SBC announced its initial commercial rollout of digital MMDS, under the brand name "Pacific Bell Digital TV," in Los Angeles and Orange County in May 1997.<sup>401</sup> The service offers more than 120 channels of digital video, with packages priced from \$31.95 to \$53.95,<sup>402</sup> and currently serves 10,000 subscribers.<sup>403</sup> Press reports indicate that SBC eventually will be able to offer digital MMDS service to five million line-of-sight homes.<sup>404</sup> SBC also operates the 42,000 subscriber MMDS system in Riverside, California.<sup>405</sup> In February 1996, BellSouth acquired Wireless Cable of Atlanta, Inc. ("WCA") and its MMDS operations for \$46.9 million. WCA has 9,000 subscribers in the Atlanta region.<sup>406</sup> BellSouth has also entered into or completed agreements to acquire MDS and ITFS channel rights covering 4.5 million homes in and around several large markets in Florida, including Miami, and in New Orleans, Louisiana, and Louisville, Kentucky. BellSouth launched its digital MMDS system in New Orleans on November 19, 1997.<sup>407</sup> BellSouth states that it plans to launch digital MMDS service in Atlanta during the fourth quarter of 1997, in Jacksonville and Orlando, Florida during the first half of 1998, and in Miami/Ft. Lauderdale and Louisville during the second half of 1998.<sup>408</sup>

---

<sup>400</sup>BellSouth Comments at 7-8 and Exhibit 1, "Letter to Sen. John McCain," at 2.

<sup>401</sup>Recent reports indicate that these MMDS systems might be sold or subject to a management buyout. Price Colman, *SBC Selling LA Wireless Cable*, *Broadcasting & Cable*, Dec. 8, 1997, at 90.

<sup>402</sup>PacificTelesis, Pacific Bell, Nevada Bell, *Pacific Bell Digital TV Begins Initial Rollout in Southern California* (online news release), May 29, 1997.

<sup>403</sup>Letter from Link Brown, Director - Federal Regulatory, SBC Communications, to Meredith Jones, Chief, Cable Services Bureau, Sept. 1997.

<sup>404</sup>Rob Doyle, *A Wireless Weapon in the Cable Wars*, *BusinessWeek*, Oct. 14, 1996, at 105; confirmed by telephone interview with Gina Harrison, Director Regulatory Affairs, PacTel (Feb. 26, 1997).

<sup>405</sup>Pacific Telesis Group, *Pacific Telesis Acquires Wireless Cable TV Company* (news bulletin), Apr. 18, 1995.

<sup>406</sup>BellSouth Corp., *BellSouth Acquires Wireless Cable of Atlanta* (news release), Feb. 12, 1997, at 1; Web site at <http://www.bellsouthcorp.com/proactive/documents/render/10098.html>. After upgrading the system to digital technology, the company is expected to provide 100 channels of video programming with access to more than 900,000 line of sight households in the Atlanta region.

<sup>407</sup>BellSouth Corp., *BellSouth Brings New Era of Home Entertainment Service to New Orleans* (news release), Nov. 17, 1997, at 1. The system offers 160 channels and offers service to 400,000 homes.

<sup>408</sup>BellSouth Comments at 7. US West in its comments names in further detail BellSouth's Florida MMDS holdings: all of Dade County, which surrounds Miami, Broward County, Jacksonville, Orlando, Daytona Beach, Ft. Myers, Lakeland, and Bradenton. US West Comments at 8-9.

111. LEC investment in MMDS has experienced some retrenchment as well. At the end of 1996, Bell Atlantic and NYNEX suspended investment in their MMDS systems.<sup>409</sup> Early in 1997, SBC terminated PacTel's wireless cable service in San Diego.<sup>410</sup>

112. *In-Region Cable Franchises.* In the *1995 Report* and the *1996 Report*, we reported that a number of LECs had pursued cable franchises in their service areas as a means of providing video services to their customers.<sup>411</sup> The most aggressive of the LECs in this area was, and continues to be, Ameritech. Ameritech has acquired 63 cable franchises, primarily overbuilds, in Illinois, Michigan, Ohio, and Wisconsin, potentially passing more than 1.1 million homes, and continues to seek new franchises. Forty of these cable franchises were operational as of December 31, 1997.<sup>412</sup>

113. BellSouth has acquired cable franchises in 18 areas in Alabama, Florida, Georgia, South Carolina, and Tennessee, passing 1.2 million cable households.<sup>413</sup> GTE has ten competitive cable franchises, and one non-competitive franchise.<sup>414</sup> SNET has received a state-wide cable franchise in

---

<sup>409</sup>*1996 Report*, 12 FCC Rcd at 4398 ¶ 72; K.C. Neel, *Where's Wireless Cable? Very Up in the Air*, Cable World, June 2, 1997, at 1, 46.

<sup>410</sup>Joe Schlosser, *Pac Bell's Low-Key Digital*, Broadcasting & Cable, Oct. 6, 1997, at 62.

<sup>411</sup>*1995 Report*, 11 FCC Rcd at 2106-07 ¶ 97, *1996 Report*, 12 FCC Rcd at 4398-99 ¶¶ 73-74. See paras. 180-204 for a discussion of the competitive effects of these LEC-owned cable franchises.

<sup>412</sup>The active franchises are located in: *Illinois*: Glendale Heights, Naperville, Glen Ellyn, Arlington Heights, Elgin; *Michigan*: Canton Township, Plymouth, Plymouth Township, Northville, Fraser, Northville Township, Southgate, Garden City, Troy, Wayne, Lincoln Park, Sterling Heights, Clinton, Mount Clemens, St. Clair Shores, Allen Park, Utica, Melvindale, Royal Oak, Madison Heights; *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. The franchises which have not yet begun service are located in: *Illinois*: Vernon Hills, Prospect Heights, Des Plaines, Schaumburg; *Michigan*: Warren, Trenton, Pleasant Ridge, Ferndale, Huntington Woods, Clawson, Berkley, Roseville, Eastpointe, Westland, Riverview; *Ohio*: Marble Cliff, Valleyview, Minerva Park, Madison Township, Westlake, Jackson Township, Dublin, Prairie Township. Ameritech Comments, Attachment 1 at 1-2. Updated by Geoff Potter, Ameritech New Media, on December 31, 1997.

<sup>413</sup>The franchises are located in: City of Vestavia Hills, Alabama; Counties of Broward, Dade, Seminole, and St. Johns (World Golf Village) and Cities of Coconut Creek, Orlando, and Pembroke Pines, Florida; Counties of Cherokee, Dekalb, and Gwinnett and Cities of Chamblee, Duluth, Lawrenceville, Roswell, and Woodstock, Georgia; City of Charleston (Daniel Island), South Carolina; and City of Bartlett, Tennessee. BellSouth Comments at 7, and telephone interview with Tom Rawls, Vice President and General Council, BellSouth Interactive Media Services, Inc. (Sept. 10, 1997).

<sup>414</sup>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). GTE reports that it is already signing up subscribers for the Clearwater, Florida system and plans to pass 95,000 homes in this area. *GTE Launches Its First Cable Franchise in Florida*, Multichannel News, July 1, 1996, at 2. See also *Local and State Actions*, Warren's Cable Regulation Monitor, Aug. 26, 1996; *Notebook*, Television (continued...)

Connecticut, potentially passing 1.3 million homes, where previously it had applied to provide video dialtone ("VDT") service.<sup>415</sup> SNET has begun offering 80 channels of cable service to 2,000 customers in Uniondale, Connecticut, and says that it plans to reach one-third of the state's homes by the end of 1998, and all homes in Connecticut by 2007.<sup>416</sup> US West has elected to pursue cable franchises for its former Omaha, Nebraska, VDT trial.<sup>417</sup> Bell Atlantic is also constructing and testing an advanced Switched Digital Video ("SDV") system in the mid-Atlantic region, but rollout and service plans are unclear.<sup>418</sup>

114. In contrast, Pacific Bell Video Services, which, before its merger with SBC in 1997, had obtained cable franchises for San Jose,<sup>419</sup> and the surrounding Santa Clara County in California<sup>420</sup> is now in the process of terminating these franchises.<sup>421</sup> SBC is reportedly looking for a buyer for the incomplete system that Pacific Bell Video Services was constructing to serve these franchises.<sup>422</sup> SBC performed an 18-month cable trial in Richardson, Texas, a suburb of Dallas,<sup>423</sup> which ended on July 7, 1997.<sup>424</sup> Sprint applied for cable franchises in Wake Forest and Wake County, North Carolina last year, where it had been

---

<sup>414</sup>(...continued)

Digest, Sept. 2, 1996. GTE plans to pass 122,000 homes in Thousand Oaks, California. *Ameritech Gets 2 More System Approvals*, CableFAX, Feb. 8, 1996. In addition, GTE owns four currently operational SMATV systems in the Dallas/Ft. Worth area. These systems serve 800 video subscribers, and offer integrated telephony and video services, although not on the same wire. Telephone interview with Sharon Harris, Director of Regulatory Affairs, GTE (Feb. 26, 1997).

<sup>415</sup>*SNET Gets Statewide Cable Franchise in Connecticut*, Comm. Daily, Sept. 26, 1996, at 1.

<sup>416</sup>David D. Kirkpatrick, *SNET Is Offering Cable-TV Service in Connecticut*, The Wall Street Journal, Mar. 12, 1997, at B6, and *SNET Launches Cable Service in Conn., Competes with TCI*, Comm. Daily, Mar. 12, 1997, at 6.

<sup>417</sup>Letter from Robert H. Jackson, U S West's Executive Director - Federal Regulatory, to Meredith J. Jones, Chief, Cable Services Bureau, Apr. 16, 1996.

<sup>418</sup>See para. 177 *infra* for more details on Bell Atlantic's SDV plans.

<sup>419</sup>Pacific Bell Video Services launched its commercial video service initially to 7500 homes in the San Jose area. Pacific Telesis Corp., *Pacific Bell Video Service Launches Commercial Cable TV Service in San Jose* (press release), Aug. 30, 1996; Pacific Telesis Corp., *San Jose First California City to Get Cable TV Franchise From Pacific Bell Video Services* (press release), June 25, 1996.

<sup>420</sup>*Local and State Actions*, Warren's Cable Regulation Monitor, Aug. 19, 1996.

<sup>421</sup>Letter from Steven M. Harris, Vice President, External Affairs, Pacific Bell Video Services, to William F. Caton, Secretary, Federal Communications Commission, July 31, 1997.

<sup>422</sup>P.J. Huffstutter, *PacBell Seeking Buyers for Its Cable TV System Business*, Los Angeles Times, Nov. 13, 1997.

<sup>423</sup>*Comm Daily Notebook*, Comm. Daily, Feb. 3, 1997.

<sup>424</sup>Letter from Mark K. Armstrong, Vice President, External Affairs, Southwestern Bell, to William F. Caton, Federal Communications Commission, July 11, 1997.

operating VDT trials<sup>425</sup> but later notified the Commission that it would not seek a cable franchise in this area and that it was terminating video service in Wake County.<sup>426</sup>

115. *Out-of-Region Cable Systems.* We previously reported on out-of-region cable systems owned by LECs,<sup>427</sup> and on US West's purchase of Continental Cablevision.<sup>428</sup> In late October 1997, US West announced that it will split its telephone and cable operations into two separate companies, called US West, Inc., and MediaOne, respectively. The two companies will both be publicly traded, and will have separate boards. US West plans to complete this split by mid-1998.<sup>429</sup> In addition, since the 1996 Report, SBC has sold its interest in cable systems in Montgomery County, Maryland, and in Arlington, Virginia.<sup>430</sup>

116. *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. Currently, most of the firms receiving certification from the Commission as OVS operators are not LECs.

117. The Commission has certified seven OVS operators to offer OVS service in ten areas: Bell Atlantic for Dover, New Jersey (its former VDT system);<sup>431</sup> Digital Broadcasting Open Video Systems for Southern California;<sup>432</sup> MFS for systems in Boston and New York City;<sup>433</sup> Urban Communications

---

<sup>425</sup>Federal Communications Commission, *Cable Services Action (Sprint, Inc.)*, FCC Public Notice (Nov. 1, 1996).

<sup>426</sup>See *In the Matter of Sprint Corporation Request for Extension of Time and Notification of Termination of Trial*, Order, 12 FCC Rcd at 4198, DA 97-695 (CSB Apr. 8, 1997).

<sup>427</sup>1994 Report, 9 FCC Rcd at 7498 ¶ 107 n.305. In particular, we discussed SBC in Montgomery County, Maryland, and Arlington, Virginia, and US West in the Atlanta, Georgia, area

<sup>428</sup>1996 Report, 12 FCC Rcd at 4400 ¶ 75.

<sup>429</sup>US West Chairman Richard McCormick told reporters that the company realized that the telephone and cable businesses are not converging. *U S West to Split Cable and Phone Businesses into Publicly Traded Companies*, Comm. Daily, Oct. 28, 1997, at 1. See also Leslie Cauley, *U S West's Plan to Split Up Reflects Failure in Strategy*, Wall Street Journal, Oct. 28, 1997, at B4.

<sup>430</sup>Prime Cable had been operating these systems for SBC, and SBC sold the systems to an investment group led by Prime Cable and backed by Carlyle Group. Leslie Cauley, *SBC Communications to Sell Its Stake In Two Washington-Area Cable Systems*, Wall Street Journal, Sept. 29, 1997, at B6.

<sup>431</sup>*Bell Atlantic OVS Certification*, 11 FCC Rcd 13249 (1996).

<sup>432</sup>See *Public Notice*, DA 96-1703 (Oct. 10, 1996). Digital Broadcasting Open Video Systems ("DBOVS") proposes to use LEC facilities for the transmission of video services, although it is unclear whether DBOVS will implement this plan. DBOVS, on September 9, 1997, refiled for certification to reflect an ownership change, and this application has been approved by the Cable Services Bureau. *Public Notice*, DA 97-2301 (Sept. 19, 1997).

<sup>433</sup>See *Metropolitan Fiber Systems/New York, Inc. (Certification to Operate and Open Video System)*, Consolidated Order, 12 FCC Rcd 20896 (1997).

Transport for systems in New York City and Westchester County, New York;<sup>434</sup> RCN for systems in the Boston area (with Boston Edison Technology Group),<sup>435</sup> and in New York City;<sup>436</sup> Microwave Satellite Technologies, Inc., in New York City,<sup>437</sup> and GST Telecom in Albuquerque, New Mexico.<sup>438</sup> Currently, Bell Atlantic in Dover,<sup>439</sup> and RCN in New York and Boston are the only operating open video systems.<sup>440</sup>

## 2. Video Programming and Packaging

118. In the *1995 Report* and the *1996 Report*, we reported on two joint ventures for providing original video programming and packaging of existing and original video programming: Tele-TV, comprised of Bell Atlantic, NYNEX, and Pacific Telesis (now a subsidiary of SBC); and Americast, at the time comprised of Ameritech, BellSouth, SBC, GTE, and Disney Corporation. We also noted that trade press reports indicated that the viability of both ventures was precarious.<sup>441</sup> Since the *1996 Report*, Americast has lost two of its members, SBC and Pacific Telesis,<sup>442</sup> and its plans for service have been scaled back. The remaining companies in Americast have announced that they will separately handle their own programming agreements and marketing.<sup>443</sup> Program packages are being offered under the Americast

---

<sup>434</sup>See *Urban Communications Transport Corporation (Certification to Operate an Open Video System)*, Consolidated Order, 12 FCC Rcd 1336 (1997). Urban Communications Transport has not filed a Notice of Intent to begin service and does not appear to have facilities for video transport, so it is unlikely that it will be able to offer service in the near future.

<sup>435</sup>See *RCN-BETG, LLC, (Certification to Operate an Open Video System)*, Memorandum Opinion and Order, 12 FCC Rcd 2480 (1997).

<sup>436</sup>See *Residential Communications Network of New York, Inc. (Certification to Operate an Open Video System)*, Memorandum Opinion and Order, 12 FCC Rcd 2477 (1997).

<sup>437</sup>See *Microwave Satellite Technologies (Certification to Operate an Open Video System)*, Memorandum Opinion and Order, 12 FCC Rcd 3008 (1997).

<sup>438</sup>See *GST Telecom New Mexico, Inc. (Certification to Operate an Open Video System)*, Memorandum Opinion and Order, DA 97-2504 (CSB Nov. 20, 1997).

<sup>439</sup>Bell Atlantic, *Bell Atlantic Now Offering Video Services in Dover Township New Jersey* (news release), Nov. 1, 1996.

<sup>440</sup>Steve Rosenbush, *C-Tec Surges Ahead in Phome, Cable Markets*, USA Today, Sept. 15, 1997, at 3B. RCN-BETG, however, is simultaneously seeking cable franchises in Boston and some of the surrounding communities where it is already certified as an OVS operator. Press reports indicate that RCN-BETG will attempt to reach franchise agreements in the areas but will maintain OVS service if unsuccessful. Kent Gibbons, *RCN's Boston Deal Reveals OVS Pitfalls*, Multichannel News, June 9, 1997, at 1, 66.

<sup>441</sup>*1995 Report*, 11 FCC Rcd at 2109 ¶ 100, and *1996 Report*, 12 FCC Rcd at 4402 ¶ 78.

<sup>442</sup>Reports indicate that SBC pulled out on July 28, 1997, but this fact was not announced until October 6, 1997. See *SBC Pullout*, Video Competition Report, Oct. 6, 1997.

<sup>443</sup>*New Media*, Comm. Daily, Aug. 11, 1997.

brand name by BellSouth on its New Orleans digital MMDS system,<sup>444</sup> and by Ameritech on its active cable franchises.<sup>445</sup> At present, except for operations relating to Pacific Telesis' (now part of SBC) MMDS operations, Tele-TV is not providing video programming or packaging services, and announcements of cuts in staff continue.<sup>446</sup>

119. As noted in the *1996 Report* and paragraph 108 above, LECs do not yet present a large, nation-wide competitive presence in the MVPD market. Some LECs continue to test various technologies and construct various types of systems for video delivery. Other LECs appear to have a diminishing interest in the video marketplace. It appears that LECs will adopt different approaches depending on their varying business strategies. LECs, to the extent that they have entered the MVPD market, have done so through most of the possible means available to them: MMDS, in-region and out-of-region cable franchises, and open video systems. Although it is unlikely that LECs will move beyond entry into selected markets for the foreseeable future, LEC video operations in these selected markets represent a notable competitive presence.

#### I. Electric and Gas Utilities

120. Since the *1996 Report*, several utilities have announced or commenced ventures involving multichannel video programming distribution. QST Communications, an unregulated affiliate of Central Illinois Light Co., is building a network for high-speed voice, data and video services in Peoria, Illinois.<sup>447</sup> RCN and Potomac Electric and Power Company ("PEPCO") announced a venture to build a fiber network for local telephone and dial-up Internet access services and for eventual provision of cable television and high-speed data access services in the Washington, D.C., area.<sup>448</sup> Access Communications First Coast, a partnership of Clay Electric Cooperative and UtiliCom Networks, plans to offer video, local and long distance telephony, Internet access, shopping, data services, energy management and home security

---

<sup>444</sup>See BellSouth Corp., *BellSouth Brings New Era of Home Entertainment Service to New Orleans* (news release), Nov. 17, 1997.

<sup>445</sup>See Ameritech New Media, *Ameritech New Media Cable Franchises*, Oct. 7, 1997.

<sup>446</sup>Bill Carter, *Former CBS President Quits Troubled Tele-TV Venture*, New York Times, Apr. 7, 1997, at D8. The article states that Tele-TV laid off half of its workforce.

<sup>447</sup>Fred Dawson, *Utilities Turn Up Juice On Telecom Compete Projects*, Multichannel News Broadband Week, Oct. 14, 1996, at 81, 83 ("*Multichannel News (Utilities Turn Up Juice)*") (reporting that QST has begun building a network using state-of-the-art optical rings).

<sup>448</sup>Martha M. Hamilton and Mike Mills, *Pepco Plans Phone, Web, Cable Service*, Washington Post, Aug. 6, 1997, at A-1. PEPCO and RCN plan to enter local telephone services as a retail reseller of services purchased on a wholesale basis from Bell Atlantic. *Id.*

monitoring services in Clay County, Florida.<sup>449</sup> Some municipally-owned utilities are providing or plan to provide cable television service in their respective areas.<sup>450</sup>

121. Utilities' provision of non-energy services may extend the value of utilities' existing network and non-network assets. Utilities, for example, use communications networks for load management, thereby saving energy and reducing capital investment.<sup>451</sup> They may be able to use these networks to provide multichannel video and other services to derive additional revenue with proportionately little additional investment.<sup>452</sup> Industry observers, moreover, 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.<sup>453</sup> Utilities, however, may benefit from teaming with other companies for extension into video and telecommunications businesses because utilities have little experience in consumer marketing or entrepreneurial entry into competitive markets.<sup>454</sup> TeCom Inc.'s agreement with EchoStar is an example of potential production and marketing efficiencies. Under this agreement, TeCom plans to develop the capability to use EchoStar DISH Network set-top boxes in providing energy management services to customers who subscribe to the DISH

---

<sup>449</sup>*Comm Daily Notebook*, Comm. Daily, May 28, 1997 (incumbent cable operators in Clay County include Time Warner, Continental and P.D.Q. Cable TV) (UtiliCom specializes in partnerships with utilities to build telecommunications networks).

<sup>450</sup>*See* New York Times, Oct. 4, 1997, B1 (reporting plans for municipal video and telecommunications networks in Alta, Spencer, and Muscatine, Iowa; Tacoma, Washington; and Newnan, Georgia, and active systems in Harlan and Hawarden, Iowa, and Glasgow, Kentucky).

<sup>451</sup>Ross Kerber, *Utilities Reach Out to Add Phone, Cable Service*, Wall Street Journal, Jan. 27, 1997, at B-1 ("The Wall Street Journal (*Utilities Add Phone, Cable Service*)").

<sup>452</sup>*See* Multichannel News (*Utilities Turn Up Juice*) (electric utilities' infrastructure costs are about \$7,000 per customer while cable networks' infrastructure costs are about \$700 to \$1,000 per customer; utilities savings from load management can cut capital costs by 50 percent; accordingly, load management energy savings alone can almost justify an electric utility's cost of a hybrid fiber-coax communications network, which can also be used in providing other communications services and video programming). *See also* The Wall Street Journal (*Utilities Add Phone, Cable Service*) (electric and gas companies own a total of about 600,000 miles of high-capacity, fiber-optic cable and have rights of way to lay more cable).

<sup>453</sup>*See, e.g., id.*; *Comm Daily Notebook*, Comm. Daily, Nov. 13, 1996 (a recent consumer study comparing power, telecommunications and cable television providers found that "electric companies ranked No.1 in customer recognition, loyalty, satisfaction," quoting Paul Demerly, President, Napa Valley Consulting Group). Whether for production, marketing or other reasons, many utilities are pursuing video programming distribution, telecommunications and/or other communications-related services. *See, e.g.,* The Wall Street Journal (*Utilities Add Phone, Cable Service*).

<sup>454</sup>*Id.* As an alternative to entering into multichannel video distribution, some utilities have begun to work with cable operators to determine the feasibility of using existing cable plant to support utility load management. *See* Multichannel News (*Utilities Turn Up Juice*) (five such trials are under way in various parts of the country).

Network.<sup>455</sup> In addition, pursuant to its agreement with EchoStar, TeCom will offer to energy industry firms the right to market EchoStar's DISH Network DBS services to potential subscribers.<sup>456</sup>

### III. MARKET STRUCTURE AND CONDITIONS AFFECTING COMPETITION

#### A. Horizontal Issues in Markets for Video Programming

122. As in previous reports, we examine several issues concerning horizontal structure and rivalry in markets for video programming and particularly examine the issues in two separate 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 *1996 Report* in concentration and the extent of competition in local markets. We then examine the upstream market and consider the changes in concentration at the national and regional levels, including the effects of some recent (or announced) cable mergers, acquisitions, partnerships, and joint ventures.

##### 1. Market Definition

123. Our approach to market definition is the same as in prior reports. As we explained in the *1996 Report*,<sup>457</sup> 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 as a starting point for the definition of the relevant product.

124. In the *1996 Report*, 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 "footprints" of the various service providers.<sup>458</sup> This area of overlap determines the potential MVPD choices available to a typical household. For MDUs, the relevant geographic market 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. The relevant product market will depend on the substitutability or relative attractiveness (including the price) among the MVPD choices to the household or MDU. Alternative providers may offer a bundle of services including video programming, telephony, Internet,

---

<sup>455</sup>TeCom Inc., *TeCom Announces Agreement with EchoStar Communications Corp.* (press release), June 20, 1997 (<http://www.tampaelectric.com/tecom/INNwsEchoStar.html>). TeCom is an affiliate of Tampa Electric Company.

<sup>456</sup>*Id.*; UTC Report: *Highlights of Recent Video and Cable Related Activities of Electric and Gas Utilities, October 1996-August 1997.*

<sup>457</sup>*1996 Report*, 12 FCC Rcd at 4418 ¶115.

<sup>458</sup>*Id.* at 4418 ¶117.

and security. Data limitations, however, limit our ability to define the markets more rigorously or to measure the market shares of non-cable MVPDs in each individual local market across the country.

125. In the upstream market for video programming, the buyers of video programming are cable operators and other video service providers, and the sellers are programmers. 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. The use of buying cooperatives is an additional means of coordinating buying decisions. Concentration of ownership among buyers in this market is one indicator of the likelihood that coordinated behavior among buyers will be successful.<sup>459</sup> The more concentrated the market, the more likely that buyers will possess some market power (or "monopsony" power).

## 2. *Concentration in Local Markets*

126. In previous reports, we concluded that local markets for the delivery of video programming (i.e., the downstream markets) were highly concentrated and characterized by substantial barriers to entry by potential MVPDs.<sup>460</sup> In MDU markets, landlords may have a choice of more than one provider. However, potential entry into MDU markets may be discouraged or limited by incumbent video providers that have negotiated long-term exclusive contracts at a time when alternative service providers were not available.<sup>461</sup> As a result, 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 MVPD subscribership data for each local market. Using this approach, we assume that each local market is identical and reflects the market shares that each MVPD holds on a national basis. A second measure we

---

<sup>459</sup>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.

<sup>460</sup>1994 Report, 9 FCC Rcd at 7541 ¶ 201; 1995 Report, 11 FCC Rcd at 2123-24 ¶ 132; and 1996 Report 12 FCC Rcd 4419 ¶ 118.

<sup>461</sup>See, *Telecommunications Services Inside Wiring, Customer Premises Equipment, In the Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992: Cable Home Wiring*, CS Docket Nos. 95-184 and 92-260, Report and Order and Second Notice of Proposed Rulemaking, FCC 97-376 ¶¶ 258-261 (rel. Oct. 17, 1997) summarized at 62 Fed. Reg. 61065 (Nov. 14, 1997).