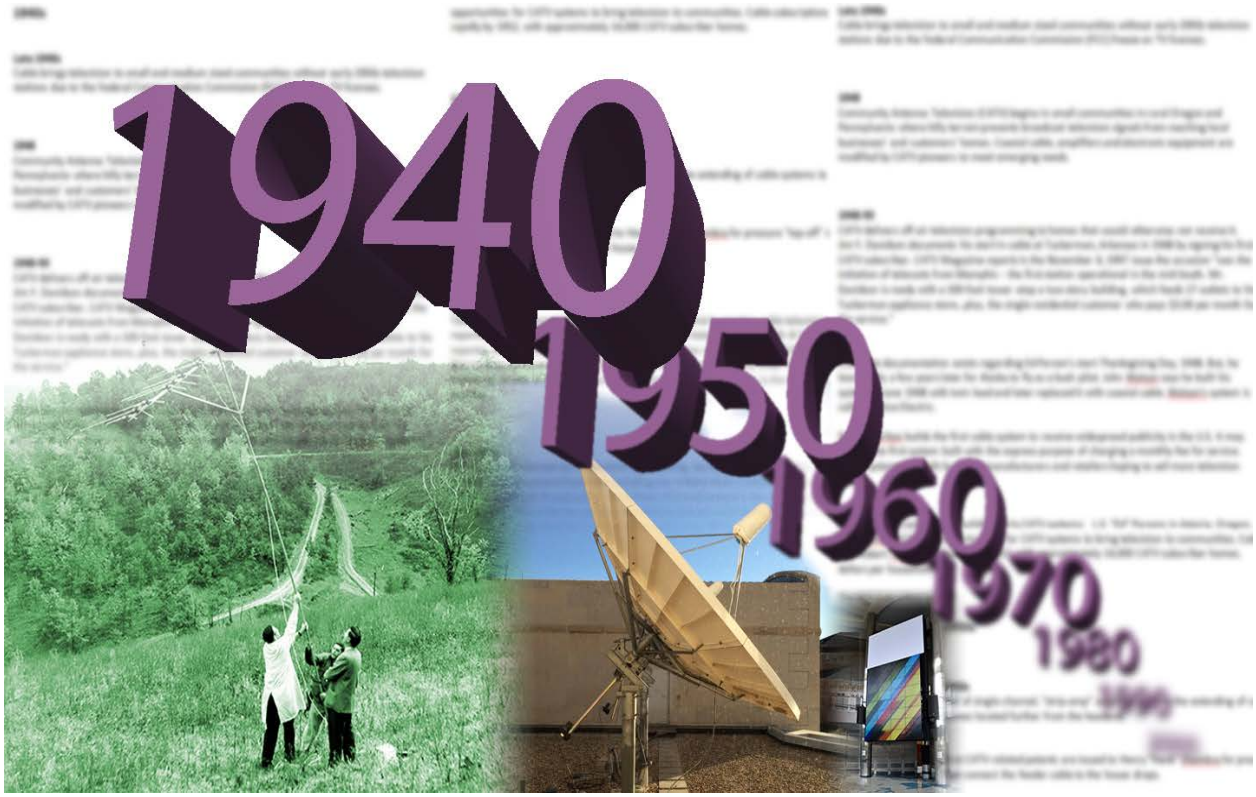

The Cable History Timeline

1940s

Late 1940s
Cable brings television to small and medium sized communities without early 1950s television stations due to the Federal Communication Commission (FCC) freeze on TV licenses.

1948
Community Antenna Television (CATV) begins in small communities in rural Oregon and Pennsylvania where hilly terrain prevents broadcast television signals from reaching local businesses' and customers' homes. Coaxial cable, amplifiers and electronic equipment are modified by CATV pioneers to meet emerging needs.

1948-50
CATV delivers off-air television programming to homes that would otherwise not receive it. Jim Y. Davidson documents his start in cable at Tuckerman, Arkansas in 1948 by signing his first CATV subscriber. CATV Magazine reports in the November 6, 1997 issue the occasion "was the initiation of telecasts from Memphis – the first station operational in the mid-South.

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Mr. Davidson is ready with a 100-foot tower atop a two-story building, which feeds 17 outlets to his Tuckerman appliance store…plus, the single residential customer who pays $3.00 per month for the service."

Elaborate documentation exists regarding Ed Parson's start Thanksgiving Day, 1948. But, he leaves only a few years later for Alaska to fly as a bush pilot. John Walson says he built his system in June 1948 with twin lead and later replaced it with coaxial cable. Walson's system is called Service Electric.

Robert Tarlton builds the first cable system to receive widespread publicity in the U.S. It may also be the first system built with the express purpose of charging a monthly fee for service. Other systems are built by TV set manufacturers and retailers hoping to sell more television sets.

Among those credited with building early CATV systems: L.E. "Ed" Parsons in Astoria, Oregon, John Walson of Mahanoy City, Pennsylvania, Martin Malarkey, Jr. of Pottsville, Pennsylvania and Robert Tarlton of Lansford, Pennsylvania are. Installation costs are high –several hundred dollars per household. The monthly fee is about $3.50.

The FCC puts a four-year freeze on licensing new broadcast stations, which creates opportunities for CATV systems to bring television to communities. Cable subscriptions increase rapidly by 1952, with approximately 14,000 CATV subscriber homes.

1950s

1950s

Use of single-channel, "strip-amp" amplifier permits the extending of cable systems to homes located further from the headend.

First CATV-related patents are issued to Henry "Hank" Diambra for pressure "tap-off" devices that connect the feeder cable to the house drops.

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Early 1950s
Television Digest, owned by Triangle Publishing, is the first to mention cable television, reporting on the construction of Ed Parson's system in Astoria, Oregon. With Al Warren as reporter, and then bureau chief, Television Digest begins regular coverage of the industry. Warren later takes over the publication and develops a new company under his name, Warren Publishing; as one of the leading sources of information for executives in the television business.

Late 1950s
Burt Harris, who started out in television broadcasting, becomes involved in cable. He buys systems and wins several franchises, including one in Bakersfield, California, where one of his partners is Time Life Broadcasting. This is Time's first involvement in the cable business. Harris later becomes one of the few early broadcasters to achieve major leadership roles, including chairmanship of the National Cable Television Association (NCTA) board.

1950
Charles E. Clements builds the first cable system in Waterville, Washington. He is one of the founders of TeleVue, which is later sold to CBS and forms the foundation for what later becomes Viacom Cable.

1951
The National Community Television Council, the forerunner of the NCTA, is organized at the Necho-Allen Hotel in Pottsville, Pennsylvania.

1952
The National Community Television Council changes its name and formally organizes as the National Community Television Association (NCTA).

Roy Bliss and Tom Mitchell, who became partners in the early 1950s, build one of the first cable systems in the West - Worland, Wyoming.

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1953
The Casper, Wyoming CATV system is one of the first to use microwave relay systems to bring distant television signals (in this case, from Denver television stations) to a cable system.

Bill Daniels wants to build a system in Casper, Wyoming, and taking the advice of his partner, hires two of his nephews, Gene and Richard Schneider to start the process.

1953-54
Earl Hickman and others use cable-powering. Cable-powered and messenger-mounted amplifiers are introduced to the cable industry by C-COR Electronics.

1954
Low-cost expansion of channel carriage capacity beyond three channels is made possible with the development of "split-band" amplifiers (MLAs) by Blonder-Tongue.

After visiting Jerrold President Milton J. Shapp, Benjamin J. Conroy, Jr. and his father agree to pay $75,000 for a 50 percent share of the franchise Jerrold has for building a system in Uvalde, Texas. Ben goes to "cable school" at Williamsport, Pennsylvania, one of the largest systems in the country.

The FCC grants the first common carrier microwave construction permit to J. E. Belknap & Associates of Poplar Bluff, Missouri.

1955
Ed Allen begins his career in the cable industry as general manager of the cable system in Winona, Minnesota, one of the first cable systems in that state. He goes on to become a legendary leader in the industry.

1956
Alan Gerry founds Cablevision Industries Corporation (CVI), which provides cable service to Liberty, New York. His innovative capital structure enables the company to grow without accessing public equity markets.

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Spencer Kennedy Laboratories (SKL) markets Model 212-C broadband chain amplifier, based on a concept originated by Dr. W. S. Percival, a British engineer at EMI (the British counterpart to RCA). Percival received a patent in 1937. This device also overcomes the limits of single channel amplifiers installed in the early cable systems.

The FCC issues its landmark opinion in *Frontier Broadcasting Company v. Collier* that CATV systems are not common carriers, so the agency has no jurisdiction over them.

1956-57
Dr. Henry "Hank" Abajian begins developing solid state amplifiers at Westbury Electronics.

1957
Ed Whitney is named the first Executive Director of the National Cable Television Association.

In *Pahoulis v. United States*, the U.S. Court of Appeals becomes the first federal court to affirm the master antenna concept as applied to CATV systems. It further holds that the federal excise tax on communications does not apply to CATV service and orders a refund to subscribers that eventually amounts to $35 million.

1957-58
Jerrold Electronics Corporation markets an all-channel broadband amplifier for channels 2-13 (Jerrold 2300) and the All-Band Cascader (ABC) covering channels 1-13; plus FM.

1958
The United States Tax Court rules in *Teleservice Company of Wyoming Valley v. Commissioner of Internal Revenue* that CATV systems cannot treat installation charges as “contributions in the aid of construction” for federal tax purposes. This tax issue leads to the formation of the National Community Television Council.

Bill Daniels starts Daniels and Associates, the industry's first brokerage and financial consulting service.

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AT&T consent decree is issued, restricting the phone company to common carrier service.

1958-59
Systems begin carrying FM radio stations and "weather scans" (a stationery camera which pans between gauges showing local temperature, barometric pressure, wind, etc.). Weather scans provide an additional opportunity to sell local advertising by posting the advertiser's message printed on a fixed placard beside the gauges. Customers can also listen to background music while they watch the weather information.

1959
The FCC issues its first official investigation of the CATV industry's impact on broadcasters. The ruling "found nothing that would justify us in taking action or seeking authority in which or under which we could act to bar CATV from coming into or continuing to operate in a particular market."

Multiple System Operators (MSO) begin a period of rapid expansion by establishing and acquiring additional franchises and cable systems.

The Staff Report of the Senate Committee of Interstate and Foreign Communications on the "Problems of Television Service for Smaller Communities" (Cox Report) is released. This is the first Congressional investigation of CATV and it strongly criticizes the FCC for not seeking legislation to regulate CATV.

1960s

1960s
Telephone companies enter the CATV business in both construction and operations, posing a new competitive threat. Marketing is minimal due to high customer interest in cable. In small, "classic" systems where broadcast channel reception is a problem, CATV penetration can reach over 90 percent.

1960
Legislation to give the FCC regulatory authority over cable is sent back to committee where the

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bill dies. The industry is divided on the issue, with a number of operators supporting FCC licensing and protection similar to that for broadcasters.

1961
TelePrompTer's Irving B. Kahn and Hubert J. Schlafly demonstrate Key TV, an early pay TV concept, during the second Patterson-Johansson heavyweight boxing fight.

One of the first heavyweight boxing fights carried on a cable system is the Floyd Patterson-Ingamer Johannson event on March 12. It is offered at no cost to all customers in TelePrompTer's recently purchased Elmira, New York system. For customers who don't have cable, but sign up for installation, the fight is also shown at the local theater on a big screen projector. New York Telephone reluctantly agrees to allow the event, in spite of the pole contract terms that state "no Pay TV," because the event is free.

Elmira Video General Manager is Leslie (Les) Read.

1961-62
Jerrold introduces the Channel Commander headend signal processor.

1962
The technical quality of individual cable channels is enhanced by the use of aluminum shielded distribution cable with foam dialectric. Meadville Master Antenna, Inc., Meadville, Pennsylvania, is the first system entirely built with this technology.

The FCC rules that CATV systems could use microwave relay systems to bring broadcast signals from distant cities, only by showing that there would be no economic impact to broadcasters.

1963
Twelve hundred cable systems serve more than 1 million homes.

The U.S. Court of Appeals affirms the FCC position in *Carter Mountain Transmission Corp. v. FCC*. The decision is the foundation of the FCC's "economic impact" rules that restrain cable's growth in the next decade.

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1965
The use of solid state technology in amplifiers and headend equipment spreads through the cable industry.

The NCTA creates a National Award in memory of Larry Boggs, a pioneer cable operator. Boggs started the Vumore Company in Ardmore, Oklahoma in 1950 and attracted the investment of Video Independent Theaters in 1952. The company also operated one of the early common carrier microwave services and was eventually bought by RKO General, which became CableCom-General. The Larry Boggs Award is presented to the person whose leadership and foresight place the cable industry in the vanguard of new communications technology. The recipient of the first award is Bill Daniels, founder of Daniels and Associates.

Telemation, Inc. delivers a 24-hour Associated Press news channel (alpha-numeric) as a service to cable viewers.

The First Report and Order by the FCC, based on the *Carter Mountain* decision, begins regulation of all cable systems receiving distant broadcast signals by microwave, including must-carry and non-duplication requirements.

1966
Propagation tests for Amplitude Modulated Link (AML) microwave are conducted by TelePrompTer Corporation in Manhattan. This allows additional distant broadcast signals to be brought to the cable system headend.

Ronald Mandell and George Brownstein demonstrate dual heterodyne, set-top converters. The patent was filed in 1965 and granted July 25, 1967 under Ronald Mandell's name. This converter breaks the 12-channel barrier for ordinary home television sets. It also solves interference problems caused by direct pickup of off-air broadcast signals being received at the TV set a split second before the same channel arrives via coaxial cable.

The first dinner honoring cable TV leaders who contribute to the industry is held at the 1966 NCTA convention in Miami. This group of 21 becomes the foundation for the Cable TV Pioneers.

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The FCC extends regulation to all cable systems and requires systems in the top 100 television markets to obtain FCC approval to import distant signals via microwave.

The FCC grants the first Community Antenna Relay Service (CARS) license to Santa Maria Valley Cable TV.

1967
Gill Cable in San Jose, California, constructs what is believed to be the first dual-channel cable system. This gets around the channel capacity limitations of cable and customer equipment. (A/B switches allow customers to select which cable will deliver these services)

NCTA substitutes the word “Cable” for "Community" in its name.

1967-68
Jerrold introduces a Transistor Main Line (TML) transistor amplifier line.

1968
National Cable Television Institute is founded to promote technical education in the industry.

Cypress Communications Corporation is the first cable company to complete a public stock offering.

The U.S. Supreme Court in *Fortnightly Corp v. United Artists* upholds the master antenna concept. The ruling affirms that cable operators are not responsible for paying copyright fees under the 1909 copyright law to producers, artists and actors for programming carried on cable systems.

In *United States v. Southwestern Cable Corporation*, the U.S. Supreme Court upholds the FCC's jurisdiction over cable television as being "reasonably ancillary to the effective performance of the Commission's responsibility for regulating broadcasting.”

The FCC rules under Section 214 of the Communications Act that telephone companies must file for a Certificate of Public Convenience before building cable facilities; eliminating a strong

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competitive advantage of telcos over cable companies.

The FCC freezes development of cable systems in the top 100 markets with an "anti-leapfrogging" notice that cable systems have to obtain permission of any distant station before importing it. Cable systems in a 35 mile radius of TV stations in smaller markets have to carry nearest network, independent and public stations while it considers new rules for cable.

1969
Twenty two thousand sixty cable systems serve more than 3.6 million homes.

The Society of Cable Television Engineers, Inc. (SCTE) is organized to provide education and training to the industry's technical personnel.

The U.S. District Court in Nevada rules that Nevada can regulate cable through the Public Utilities Commission.

The U.S. Supreme Court affirms the FCC "Section 214" ruling which requires telephone companies to file for Certificates of Public Convenience before building cable facilities.

The FCC requires cable systems with more than 3,500 customers to provide locally originated programming.

The FCC requires cable systems with more than 3,500 subscribers to provide local origination programming.

1970s

1970s
In a flurry of franchise activities a number of smaller cities and towns grant cable franchises.

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1970

The reach of larger cable systems is extended by the introduction of the Harmonically Related Carriers (HRC) by Israel "Sruki" Switzer and Arie Zimmerman.

Jerrold introduces Starline One, the first "modern" transistor amplifier.

The Wired Nation, by Ralph Lee Smith, describes the possibilities of a national, interactive cable network and excites public interest in the potential of cable television.

The FCC permits the merger of TelePrompTer and H&B American, making TelePrompTer the largest cable company in the nation. It serves 419,000 subscribers or 10 percent of the industry.

FCC rules prohibit telco ownership of cable systems in their own service area.

FCC prohibits cable system ownership by national television networks or television stations in the cable system's area.

The FCC adopts "anti-siphoning" rules to protect programming on broadcast television.

1971

The first synchronization suppression scrambling system is introduced at the NCTA convention in Washington by Abe Reiter of Athena. In addition, Dick Callais introduces the Hughes Subscriber Response System (SRS) and Marvin Roth of Scientific-Atlanta introduces the two-way digital communications concept; the forerunners of addressability and interactive cable.

Earl Hickman and Gay Kleykamp of Ameco introduce the Discade (TM) remote switched network architecture in Daly City and Broadmoor, California. An attempt to implement space-division multiplexing in place of frequency-division multiplexing, TM was then too costly for CATV operators to implement. [The concept of switched architecture remained alive and appeared a decade later with Times Fiber's Mini Hub].

The Cable Technical Advisory Committee is initiated by the cable industry and established at the request of the FCC. Its mission is to provide guidance on technical regulations for inclusion in the Cable Television Rules.

First full color Local Origination studio is established in TelePrompTer's Eugene, Oregon system.

The FCC preempts local authorities from regulating pay TV on cable systems. It also stays its local origination rule in response to a court decision that it did not have power to impose the requirement.

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1972
At the NCTA Convention held in Anaheim, California, Theta Com demonstrates the feasibility of computer-controlled interactive cable television using two-way cable and two-way microwave transmission. It has been preceded by two years of experimentation with two-way cable in the cable system located in El Segunda, California jointly operated by Hughes Aircraft Co. and TelePrompTer. The project, named Subscriber Response System, is later terminated because it is not financially feasible.

Among the technical standards mandated by the FCC rulemaking is two-way capability, although upstream capacity is rarely utilized by cable systems for more than two decades.

Integral sleeve fittings for aluminum cable and bonded aluminum tape shielding in drop cable (from the trunk to the home) improve transmission quality.

Funded by grants from Ford Foundation and Markle Foundation, the Cable Television Information Center opens. It is designed to help communities in the franchising process.

Pay programming begins. TelePrompTer delivers the first pay sports programming on its Long Island system. Home Box Office (HBO) delivers its first pay TV programs by microwave (a movie and a hockey game) to 365 subscribers in Wilkes-Barre, Pennsylvania.

HBO provides, via microwave, the first original cable television production of The Pennsylvania Polka Festival from the Agriculture Arena in Allentown to customers of John Walson's Service Electric, a cable system in Wilkes-Barre, Pennsylvania.

TelePrompTer, HBO and Scientific-Atlanta demonstrate satellite-delivered programming with the Ernie Shavers vs. Jimmy Ellis fight from Madison Square Garden and U.S. House of Representatives Speaker Carl Albert speaking from Washington D.C. to industry executives at the NCTA Convention in Anaheim. NCTA Chairman William J. Bresnan presides.

The FCC issues new and wide-ranging rules governing cable TV. Provisions include distant signal importation, program exclusivity, public access and technical requirements.

1973
Thirty-five channel (50-300 MHz) solid state amplifiers and converters become the industry standard for cable construction and operation.

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The Community Antenna Television Association (CATA) is organized as a trade association representing smaller cable system operators.

TelePrompTer, HBO and Scientific-Atlanta demonstrate satellite-delivered programming with a fight from Madison Square Garden and U.S. House of Representatives Speaker Carl Albert speaking from Washington D.C. to industry executives, including NCTA Chairman William J. Bresnan, at the NCTA Convention in Anaheim. The demonstration utilizes the Canadian Anik II satellite.

The NCTA creates a new National Award in memory of Idell Kaitz, whose representation of the industry made a significant impact on policy makers. The annual award is presented to the woman whose leadership and foresight place the cable industry in the vanguard of new communications technologies. The first winner of the prestigious Idell Kaitz award is Yolanda G. Barco; partner, Barco & Barco, Meadville, Pennsylvania and principal, Meadville Master Antenna, Inc.

Congress passes anti-blackout legislation which requires that sold-out games in professional football, baseball, basketball and hockey be made available for over the air television, rather than cable or Pay TV.

Trinity Broadcasting Network (TBN) launches.

The FCC approves applications to establish domestic communications satellites, a crucial link in cable program distribution.

1974

TelePrompTer is the first cable MSO to reach one million customers.

Polly Dunn is the first woman elected to the NCTA Board of Directors.

The FCC rescinds its local origination rule after continuing its stay of rule since 1971, despite the Supreme Court's 1972 decision giving the Commission the power to impose the rule, but requires operators to buy and maintain local origination equipment for community use.

1975

HBO begins satellite distribution of programming to the United Artists systems in Vero Beach

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and Fort Pierce, Florida and to American Television and Communications Corp's (ATC) Jackson, Mississippi system with the Muhammad Ali vs. Joe Frazier *Thrilla from Manila* boxing match on Sept. 30. The Scientific-Atlanta TVRO receiver (earth station) in Jackson is 10 meters (33 feet) in diameter and costs more than $100,000.

James Grabenstein and William O'Neil demonstrate the first use of feed-forward technology to handle expanded channel capacity and higher frequencies.

1976

Fiber optics comes into use for "super-trunk" distribution of cable signals. The first successful trial is in TelePrompTer's northern Manhattan system. This technology used FM transmission which requires a complete set of modulators at each node. At a cost of $2500 per channel, it is too expensive to use throughout the system, but allows longer trunk line runs with fewer amplifiers, better picture clarity and less interference.

Through extraordinary effort, Delmer Ports, NCTA Vice President for Research and Science, blocks the Federal Aviation Administration in its strenuous effort to force cable out of all frequencies not allocated for television.

TelePrompTer installs the first licensed 4.5 meter TVRO in Kalispell, Montana. Previously, the 10-meter earth stations were the smallest size allowed.

Ted Turner's "Watch This Channel Grow" (WTCG) in Atlanta, becomes the first satellite-delivered broadcast station.

Cable system construction is active. Most companies recover from the 1974 recession and begin building systems with the franchises granted in the early 1970s. The cost to build a new system is about $500 to $600 per subscriber. There are 3,681 cable systems serving more than 12 million customers.

The Cable Television Administration and Marketing Society (CTAM) is incorporated as a professional organization to foster improved marketing; particularly of Pay TV.

Sutton Capital forms Landmark Cablevision Associates and purchases Texas cable systems: Cisco, Eastland, Ranger, Coleman and Colorado City.

The Copyright Revision Act is passed by Congress. For the first time, this establishes a "compulsory license" allowing cable systems to retransmit broadcast stations and sets fee schedules for carrying distant signals. The cable operator is liable for copyright payments.

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PENNARAMA, now the Pennsylvania Cable Network (PCN), begins research and development programming for the first statewide instructional and public affairs network to cable systems--24 hours a day, seven days a week.

SportsChannel New York (now FOX Sports Net New York), the first regional pay cable sports service, is created by Charles Dolan, founder of Cablevision Systems Corporation. Sports Channel fills the gap in local sports cable programming and cablecasts the New York Islanders' and Nets' games.

FCC repeals distant signal "leapfrogging" rules, allowing cable systems to import signals as they choose.

1977

Warner Cable, under the direction of Gustave M. Hauser, demonstrates two-way interactive technology, QUBE, in its Columbus, Ohio system.

Annual cable television revenues surpass $1 billion. Media giants, corporations and the financial community become major players in the cable industry's growth.

U.S. Court of Appeals strikes down FCC rules limiting Pay TV, opening the way for expanded cable services. It also suggests that cable may have some First Amendment rights. (*Home Box Office v. FCC)*

The FCC approves the use of 4.5 meter earth station receivers. The ruling permits more cable systems to acquire the equipment necessary to receive nationally distributed programming via satellite.

1978

A shortage of satellite transponders is created when Satcom III is lost shortly after launch.

James L. Tanner receives a patent for a television security system based on jamming premium programming with an interfering RF carrier. The picture is corrected by a sharp notch trap installed in authorized cable service drops. This device is called a "positive trap." It is different from the previous technology, "negative trap," which denies premium channels to customers not authorized to receive the service. [Positive traps are still used in older and smaller cable systems]

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A federal appellate court affirms the FCC's preemption of local control over Pay TV. (*Brookhaven Cable TV v. Kelly)*

Congress passes a Pole Attachment Act which establishes a national policy for attaching cable wires to poles owned by utility companies.

PTL Television Network launches in April.

Viacom begins satellite distribution of Showtime, a Pay TV service.

HBO's parent company, Time Inc., invests in motion picture production with exclusive studio agreements which help to differentiate premium program services, and improve the quality and quantity of movies available on cable.

SportsChannel New York acquires the rights to cablecast non-broadcast games of the New York Yankees and Mets. With the addition of local baseball, the service becomes a year-round package achieving penetration rates as high as 70 percent of basic subscribers.

The FCC institutes registration for cable systems and reaffirms EEO requirements.

1978-82

A franchise frenzy occurs as cable franchises in the largest cities are granted. By the end of the franchise era, construction costs in the major cities escalate to $1,200 or more per subscriber.

Additional programming services proliferate as systems expand channel capacity. Channels featuring sports, programs for children, families, women, minorities, etc. are aimed at specific interest groups. The concept is called "narrow casting" and many new networks launch including: Entertainment and Sports Programming Network (ESPN), Cable News Network (CNN), Showtime, USA Network, Madison Square Garden (MSG), Black Entertainment Television (BET), Christian Broadcasting Network (CBN), Nickelodeon and Music Television (MTV).

1979

ATC has data transmission projects in four systems providing to companies such as IBM, which has direct cable links between facilities.

TRW announces development of 400 MHz hybrid technology which provides capability for cable systems to offer greatly expanded channel capacities of 60 to 80 channels.

Annual cable advertising revenues exceed $10 million. The demand for cable increases. Since

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1975, subscriptions have grown by more than 5.7 million. In 1979, 14.8 million U.S. households subscribe to cable.

Women in Cable, Inc., is organized as a professional association to provide educational opportunities and create a network for women in industry management.

American Express gets involved in cable by acquiring 50 percent of Warner Cable Company. One division, Warner Amex Cable Communications, Inc. (WACCI) becomes an MSO with the goal of using QUBE technology to secure franchises in major urban markets. Warner Amex Satellite Entertainment Company (WASEC) is formed to provide programming to the industry, which includes The Movie Channel, Nickelodeon and MTV.

The U.S. Supreme Court rejects PEG and local access requirements. (*United States v. Midwest Video Corp*)

The ACE awards for cable programming are created. Later called CableACE Awards, the industry recognizes original programming created for cable casting.

Funded by cable television companies, C-SPAN, under the direction of Brian Lamb, launches live, gavel-to-gavel television coverage of the U.S. House of Representatives. Entertainment and Sports Programming Network (ESPN) launches September 7. Galavision (Spanish-language channel) also begins satellite service.

Warner Amex Satellite Entertainment develops and begins satellite distribution for Nickelodeon, the first channel programmed exclusively for children.

In April, superstations WGN, Chicago and WOR, New York, are distributed via satellite to cable systems across the country.

ESPN launches in September.

The FCC allows use of small earth stations without licenses, but also without protection from interference.

1980s

1980s

Galium arsenide Low-Noise Block Downconverters (LNBs) that pick up high frequency signals from microwave transmitters and satellites, become less expensive and more reliable. This results in a tremendous growth in the number of backyard dish owners who receive programming via satellite. The increase in power from the satellite allows smaller dishes and

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lower costs.

Early 1980s
Frequency-agile tuners allow cable operators to buy standardized receiving equipment for headends.

Franchising activity spurs companies to promise technology and services which are still in development, including two-way addressable services like Warner Cable's QUBE demonstrated in Columbus, Ohio.

A number of big cable companies merge; including ATC with Time Inc., (ATC is headed by Monroe M. "Monty" Rifkin), TelePrompTer with Westinghouse, (Group W is headed by Daniel L. Ritchie) and Warner with American Express (Warner Amex is headed by Gustave Hauser). Smaller systems are bought by larger companies or companies outside the cable industry, e.g. newspapers and networks. Experiments in teletext (one-way interactive services) fail to create sufficient customer interest to sustain development.

Mid 1980s
Addressable trap technology is introduced, but does not gain wide acceptance due to limitation on the number of channels that can be secured.

1980
The use of addressable converters allows cable operators to control discrete channels to subscribers' homes. Addressability provides greater security against unauthorized viewing of channels. In addition, it allows system personnel to turn on and off premium services from the office without having to dispatch a service person to the subscriber's premises.

The National Association of Minorities in Cable (NAMIC) is organized to help increase and support minority employees in the industry.

On April 9, UA-Columbia Cablevision and Madison Square Garden Corp. form USA Network.

Black Entertainment Network (BET) is launched as a part time service on USA Network.

Cable News Network (CNN), the first live all-news cable channel, begins satellite service in June.

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Showtime and The Movie Channel, two premium channel services, announce a merger.
HBO launches Cinemax, another premium movie service.

Cablevision Systems Corporation forms Rainbow Programming [now Rainbow Media] to fulfill the growing need for diversified cable programming.

Bravo, the first premiere film and arts network, debuts on 110 cable systems in 22 states. The first month of programming includes original productions of symphony, ballet and opera; the first of such events produced expressly for cable television.

The FCC repeals rules which limit a cable system's ability to import distant signals and the rules which require program exclusivity on local cable systems.

1981

Segmented marketing begins and systems learn to analyze their market by types of potential subscribers. Cable revenues exceed $3.6 billion. Pay TV services are very popular in new systems where pay penetration can reach 200 - 300 percent (pay-to-basic ratio); meaning customers take two to three premium services, plus basic cable programming.

The Cable Television Advertising Bureau is organized as a trade association to assist in developing cable advertising.

A group of industry leaders gather at the home of Spencer Kaitz to establish a living memorial to his father, Walter Kaitz, a cable television pioneer. Kaitz' leadership of the California Cable Television Association made it one of the most effective state associations for the cable industry. The Walter Kaitz Foundation recruits and facilitates the placement of ethnic minorities from diverse professional backgrounds into the industry.

In *Malrite v. FCC*, a federal appellate court upholds the FCC repeal of the distant signal and program exclusivity rules.

The Playboy Channel launches as a premium channel.

Consumer News and Consumer Shopping Guide is launched in August by Vector Enterprises. It features 100 alphanumeric frames to research local supermarket prices each week and centrally assembles the information for national distribution on a system-by-system basis.

Eternal Word Television Network launches August 15. Financial News Network launches in November.

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On August 1, Warner Amex launches MTV, the first all-music cable channel, with The Buggle's "Video Killed the Radio Star".

On April 5, ABC Video Enterprises launches Alpha, a performing arts channel.

1981-85
A second wave of new networks sweeps the industry with a wider variety of programming. The Disney Channel, Lifetime, Playboy, Financial News Network, The Weather Channel, Discovery Channel, Home Shopping Network (HSN), Nashville Network, Arts & Entertainment (A&E), American Movie Classics (AMC), regional sports channels, and Pay–Per-View (PPV) channels are introduced which spurs growth and interest in cable. Competitive distribution technologies emerge, including Direct Broadcast Satellite (DBS) and Subscription Television (STV). By 1985, 6,600 cable systems serve more than 41.5 million households, which is nearly 50 percent of homes passed.

1982
State laws requiring cable access to apartment buildings constitute a fifth amendment "taking" and require just compensation, the U.S. Supreme Court rules. (*Loretto v. TelePrompTer Manhattan*)

The U.S. Supreme Court restricts states' regulation of cable content. (*Capital Cities v. Crisp)*

The U.S. Supreme Court holds that cities are not necessarily protected from antitrust laws in the cable franchising process. (*Community Communications Co., Inc. v. City of Boulder*)

CNN Headline News launches January 1st. In April, The Weather Channel launches.

In response to the FCC lifting syndicated exclusivity and distant signal rules, the Copyright Royalty Tribunal sets a rate at 3.75 percent of gross basic subscriber revenue for each Distant Signal Equivalent. As an unintended consequence, this stimulates development of non-broadcast programming.

1982-83
Times Fiber introduces the fiber optic Mini-Hub, primarily for use in MDUs. United Cable agrees to deploy the technology for its cable system in Alameda, California.

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1983
Barely out of its second year, Bravo is honored for outstanding arts programming by the New York Film & TV Festival, the National Cable Television Association, the International Film & TV Festival and the Independent Feature Project West.

PRISM (Philadelphia Regional In-Home Sports and Movies) joins the SportsChannel Network. This 24-hour channel provides exclusive coverage of the Philadelphia 76ers, Phillies, Flyers and first-run movie releases.

Daytime and Cable Health networks merge in what later becomes the Lifetime Channel. The Nashville Network and The Disney Channel launch.

The "Terry Fox Story", the first made-for-cable film is shown on HBO, which triggers a plethora of high quality movies. Showtime also successfully revives "The Paper Chase," a legal-based drama series dropped by the broadcast networks.

Broadcast television audience viewing erodes as interest in cable programming increases. Network broadcast affiliates account for less than 70 percent of the television viewing Monday-Sunday, 24 hours a day among all television households, while basic and premium cable services account for 14 percent. In cable households, broadcast network affiliate viewing is 58 percent, with basic and premium services accounting for 28 percent.

Rainbow launches SportsChannel New England (now FOX Sports Net New England) in Massachusetts, Connecticut and Rhode Island. SportsChannel New England offers award-winning coverage of the Boston Celtics and Hartford Whalers.

The country music video channel, Country Music Television (CMTV), launches March 15th.

Genesis Storytime launches. This channel is a computer graphic storybook with accompanying text that is intended to be read aloud to young children.

1984
General Electric introduces the first video compression system, Comband, offering a 2:1 compression. It is never widely deployed due to cost.

Rainbow Advertising Sales Corporation, one of the nation's largest regional and national spot cable sales firms, is established by Rainbow Programming.

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The Walter Kaitz Foundation begins a series of annual fundraising dinners designed to salute an industry leader and raise funds for the Foundation's administrative operations and educational programs. The honoree of the first dinner is Thomas Wheeler, NCTA President.

Premium service (Pay TV) subscriptions begin to decline, topping out at 87 percent (pay-to-basic ratio); largely due to the impact of video rentals.

An early DBS provider, USCI, ceases operation due to lack of subscriber interest. Comsat launches a DBS service, Satellite Television Corp.

Microband Corp. of America announces plans to provide wireless cable service.

U.S. District Court Judge Harold Greene approves the Modified Final Judgment (MFJ) consent decree which breaks up AT&T. The network distribution system is separated into seven Regional Bell Operating Companies (RBOCs). The long-distance carrier and the research businesses continue to be called AT&T.

The Cable Communications Policy Act, the first comprehensive legislation affecting the cable industry, is passed. It relaxes rate regulation, provides for orderly franchise renewals and stimulates programming development.

Arts and Entertainment Network (A&E) launches in February.

The Silent Network launches February 2. This channel features two hours a week of "signed" entertainment and information for the nation's hearing impaired.

Sports Time, a Midwest Regional sports channel launches April 3rd. It is owned by Anheuser-Busch, Multimedia and TCI.

In-Touch Network launches in mid-April. This is an around-the-clock newsstand intended for the visually handicapped with 69 popular periodicals and newspapers as a free audio service.

WPIX New York broadcast station becomes a satellite-distributed superstation on May 1.

American Christian Television System (ACTS) launches May 15.

BET becomes a separate, fully-programmed service during the day, expanding from its six-hour format shared on USA Network.

AP News Plus launches December 6. This is an improved information service with high resolution graphics allowing 16 colors on the screen at the same time and 90 pages in the cycle.

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On October 1, Rainbow Programming introduces AMC as a premium service. This is the nation's first 24-hour cable network dedicated to the uncut and commercial-free presentation of classic Hollywood films.

Rainbow Programming also takes over management of Sportsvision, later to become SportsChannel Chicago [later becoming FOX Sports Net Chicago]. The network features live coverage of the Chicago White Sox, Blackhawks and Bulls.

1985

Addressable frequency-hopping interdiction is tested as a consumer-friendly alternative to in-home or off-premises converters. [While interdiction systems are still available, they are not widely deployed].

In the largest cable deal up to that time, TCI, ATC, Comcast, Century and Daniels buy Group W's (including TelePrompTer's) subscribers for $2.1 billion.

PPV promises growth as 5.9 million homes have addressable technology available. Companies unable to provide futuristic services as promised during the franchising era early in the decade sell or renegotiate franchises. Problems with affordable, reliable technology and customers' low levels of response to limited programming create severe financial hardships.

Viacom purchases MTV networks for $690 million. MSOs begin investing in networks, including Discovery Networks, BET, The Family Channel and Turner Broadcasting. Cross-ownership becomes controversial.

The Cable Television Public Affairs Association is established.

The National Cable Television Center and Museum is established at Pennsylvania State University by the Cable TV Pioneers in association with the NCTA, CATA and state and regional cable associations.

The U.S. Court of Appeals strikes down FCC rules requiring cable operators to carry all local broadcast signals. The court holds the rules violate cable's First Amendment rights. (*Quincy Cable Television v. FCC)*

The National Academy of Cable Programming is created by the NCTA to recognize and promote excellence in cable programming.

The Discovery Channel launches and two pay-per-view services, Viewer's Choice and Request TV, begin operations. VH1 launches January 1 with soft rock music videos. Home Shopping

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Network (HSN) launches July 1st.

1986

The backyard dish industry grows to two million owners, largely because customers primarily in non-cabled, rural areas purchase expensive satellite receivers ($2,000 - $3,000), but do not pay for programming. HBO is the first service to scramble its signals full-time, ushering in a new age of security in program distribution. Sales of low power, C-Band dishes virtually grind to a halt.

With a grant from Richard S. Leghorn and initiatives by him and Joseph S. Gans, Sr., The National Cable Television Center and Museum begins exploration with NCTA and the RAND Corporation regarding the feasibility of an engineering and technical research center for the cable industry. John V. Saeman represents Daniels & Associates in meetings with RAND.

The U.S. Supreme Court, in *Preferred Communications v. Los Angeles*, holds that cable operators are entitled to some First Amendment protection, but declines to specify the extent of that protection.

Deregulation of basic rates for cable service takes effect under the 1984 Cable Act.

Cable shop-at-home networks become nationally distributed.

C-SPAN II begins live coverage of the U.S. Senate.

Rainbow Programming breaks new ground in news programming with cable's first 24-hour regional news service − News 12 Long Island.

The Nostalgia Channel launches January 1.

The FCC adopts revised must-carry rules in response to the 1985 *Quincy Cable Television v. FCC* decision.

1987

550 MHz bandwidth systems become common on rebuilds, which expands capacity to 80 channels.

After experiencing large financial needs to fund the purchase of MGM, Ted Turner sells a 35 percent share in Turner Broadcasting to major cable operators.

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National cable penetration (television households with cable) reaches 50.5 percent. Video rentals also continue to increase, which impacts Pay TV unit growth. Annual Pay TV revenues hold steady at about $4 billion with 35 million subscriptions.

The U.S. Court of Appeals rejects the FCC's revised must-carry rules on First Amendment grounds. (*Century Communications v. FCC)*

SportsChannel Florida debuts with live coverage of the University of Florida and University of Miami games.

Glenn Jones launches Mind Extension University (MEU) − The Education Network; a channel dedicated to delivering direct instruction and personal enrichment programming for cable and satellite TV viewers.

NFL football comes to cable with a three-year, $153 million deal between the League and ESPN.

CNN wins cable's first George Peabody Journalism Award.

“Down and Out in America”, a documentary produced by HBO, becomes the first cable program to win an Academy Award.

1987-88

Jack Koscinski, head of Irving B. Kahn's General Optronics, presents a paper to the NCTA 1987 Convention on the feasibility of multi-channel, VSB/AM transmission through optical fiber. Jim Chiddix, chief engineer of ATC's system in Honolulu, Hawaii, commercially deploys the technology for an Amplitude Modulation (AM) fiber system in 1988. This affordable breakthrough in fiber technology leads to better reliability and higher capacity and has become the basis for the universally adopted hybrid fiber coaxial (HFC) network architecture.

1988

Television channels begin stereo audio deployment on a wide scale.

Cable Television Laboratories (CableLabs), a research and development consortium, is established by the cable industry to monitor and explore technological innovation for the industry.

The National Cable Television Museum changes its name to the National Cable Television Center and Museum to more accurately describe its function.

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Consolidation of ownership in the industry accelerates. System sales reach a record $15 billion. Storer, Daniels, United Cable and Rogers are among the companies who sell their cable properties.

In 1989, Cable advertising revenues reach $2 billion. Total industry revenues exceed $15 billion, with more than 52 million cable customers and 9,050 cable systems.

CVI installs fiber-optic cable in its San Fernando Valley system in west Los Angeles.

NBC becomes a partner in Rainbow Programming's sports, news, and entertainment programming.

Cable-originated programming becomes eligible for Emmy Award consideration and wins three Emmys in the prime time competition.

The FCC issues orders to reinstate syndicated exclusivity. This gives broadcasters the right to request that local cable systems "black out" certain programs carried by distant stations.

1989

General Instrument compresses digital video into 6 MHz of spectrum, generating hopes of digital pictures and increased channel capacities.

Jones Intercable deploys the Cable Area Network (CAN) in Augusta, Georgia that allows fiber/coax redundancy.

Automatic number identification systems (ANI) and billing system improvements facilitate ordering pay-per-view programs in addressable systems.
Cable in the Classroom, a public service initiative of local cable companies and national cable networks, is launched. It provides commercial-free educational programming to schools across the country at no cost. Members agree to provide free installation and free basic service to both public and parochial junior and senior high schools passed by cable.

Mind Extension University (MEU) joins forces with the Library of Congress to establish the Global Library project series; to provide a TV outlet for sharing the contents of the world's largest repository of information.

The Box launches in March. CNBC launches in April.

1990s

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1990

General Instrument unveils its Digi-Cipher(TM) system on June 8 at the FCC's High Definition Television (HDTV) proceedings. The use of digital technology is so revolutionary; it erases the early lead by analog proposals from Japanese companies and dramatically changes the direction in standards taken by the television broadcasting industry. There is a flurry of predictions about rapid customer interest.

Cumulative Leakage Index (CLI) rules go into effect. These require cable operators to tighten maintenance standards and prevent possible interference to aeronautical users in the common frequency spectrum.

The satellite scrambling system comes under assault as pirates build clones and use duplicate addresses to unscramble signals.

In an attempt to counteract negative national attention on customer service, the NCTA Board of Directors recommends voluntary customer service standards for cable systems. Highlights include:

- Telephones must be answered in 30 seconds and after no more than four rings
- Installations must be performed within seven business days of the order
- Service interruptions must be responded to within 24 hours
- Customers must be notified a minimum of 30 days in advance of any changes in rates or service

To combat declining Pay TV subscriptions, a number of systems reduce rates for pay services and market them as competitively priced "packages." Competing technologies, including DBS and wireless cable (MMDS), begin to get attention from the industry and national media.

K-Prime Partners launches PrimeStar, the medium-power DBS service owned by cable operators TCI, Time Warner, Continental, Comcast, Cox, Newhouse and Viacom. The monthly price for programming (comparable to cable system pricing) includes a three-foot parabolic dish. The service is available to customers throughout the U.S. from the partners' local cable systems.

PTL becomes the New Inspirational Network. The International Channel launches in July. The Silent Networks becomes America's Disability Network in September.

Rainbow Programming launches SportsChannel Cincinnati [later becoming part of FOX Sports Net Ohio], serving Ohio, Kentucky and Indiana. SportsChannel Bay Area, later to become SportsChannel Pacific and then FOX Sports Net Bay Area, debuts with exclusive telecasts of the Oakland A's and San Francisco Giants.

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ESPN carries its first Major League Baseball game April 9 − Baltimore at Kansas City.

1991

Annual cable revenues reach nearly $20 billion. Cable ad revenue exceeds $2.9 billion and 17.1 million homes have addressable technology. TCI, U S West and AT&T announce a video-on-demand trial to market test customer interest in watching movies and programs at the times customers choose.

CNN's coverage of the Gulf War heightens customer interest in cable.

The U.S. Supreme Court rules that taxes applicable to cable, but not other media, do not violate the First Amendment. (*Turner Broadcasting v. FCC*)

TCI's Liberty Media becomes a partner in SportsChannel Philadelphia and PRISM.

After highly successful tests of the first courtroom television network, In Court, Rainbow Programming announces a partnership with TCI, Time Warner and NBC to launch Court TV.

CNN provides unprecedented live coverage of the Gulf War when broadcast networks are unable to provide live action. Consequently, cable subscriptions and public image are elevated. CNN secures dedicated transmission lines instead of regular telephone lines, which the Iraqi government promptly cuts.

1992

Facilitated by AM fiber optic technology, TCI, Time Warner and Viacom begin building systems with fiber-to-the-node design. Each node will serve 500-600 homes. The technology is called hybrid fiber-coax (HFC).

Cox Communications integrates Personal Communications Service (PCS) technology with a coaxial cable system and demonstrates the first PCS telephone call.

Cable operators begin to look seriously at using the return band (5-30 MHz) for telephony, data and impulse pay-per-view.

Advanced technology experiments feature fiber-to-the-node designs and promise interactive services such as home shopping, games, data and voice services. Among the announced tests are TCI (in four cities), Time Warner's Full Service Network in Orlando, Florida and Viacom in Castro Valley, California.

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The DBS Players are reduced to two. DIRECTV's parent company, Hughes Electronics, acquires medium-power PrimeStar Inc.'s 2.3 million subscribers and assets for $1.32 billion. DIRECTV, with a combined 7.1 million customers is the third largest provider of video services, trailing only AT&T, B&IS and Time Warner. DIRECTV also buys out USSB. The other remaining major DBS company, EchoStar, picks up the DBS assets of News Corp and MCI WorldCom, giving up only 2.5 percent of voting rights and 14.6 percent of diluted equity in a $1.2 billion deal.

The Cable Television Consumer Protection and Competition Act of 1992 is passed over a presidential veto. The law gives the FCC broad powers to re-regulate the industry. Among the provisions are stringent rate regulation and roll-backs, rules favoring broadcast stations, and items governing marketing tactics and technological requirements.

Cable's influence on politics and the presidential election includes live appearances by Ross Perot on CNN's "Larry King Live" and MTV's "Choose or Lose" campaign, which reaches young (Generation X) voters. C-SPAN provides in-depth, thorough coverage of the issues and candidates.

Interest in cable and premium services continues to grow as broadcast network affiliates' viewership declines. In all television households, network affiliates account for 54 percent of viewing Monday-Sunday, 24 hours a day, while basic and premium services account for 30 percent. In cable households, broadcast viewing is 47 percent while cable and premium service viewing is 43 percent.

Cable operators and NBC launch "Triplecast" coverage of the Olympics on a pay-per-view basis. Extensive coverage of the summer games from Barcelona, Spain is available, but tremendous technical, pricing and marketing issues keep the buy rates low. Though not financially successful, it sets the stage for future events.

Bravo brings corporate sponsorship to the network through major deals with Texaco, Eastman Kodak and Mercedes Benz.

America's Talking launches in July. The Sci-Fi Channel launches in September. Cartoon Network launches in October.

The FCC is tasked with implementing 13 different proceedings from the 1992 Cable Consumer Protection Act and freezes rates until it can address critical issues.

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1993

Time Warner announces it will use "intelligent" set-top boxes. These allow subscribers to hook into a switched video network for interactive services such as home shopping and games, as well as data and voice services. Strategic alliances between computer software companies, hardware suppliers, telephone providers and cable companies are announced. The players cooperatively share and develop technology for the new, interactive and switched services.

DIRECTV and USSB use high-powered K-Band satellites allowing reception by much smaller (18 inch) TVRO parabolic "dishes." The DBS providers select Moving Picture Experts Group (MPEG) one-digital compression as the standard.

Computer companies seek cable convergence as Time Warner and Silicon Graphics, Inc. develop the on-screen navigation system for the Full Service Network in Orlando. General Instruments collaborates with Intel, the computer chip manufacturer and Microsoft, the software designer for TCI's digital compression equipment. Scientific-Atlanta also creates a multimedia alliance with SGI.

TCI announces its intention to use video compression technology, which can offer as many as 500 channels.

Bell Atlantic successfully challenges the telco/cable cross-ownership ban specified in the 1984 Cable Act. A Federal court in Virginia rules the ban violates the First Amendment. The other six RBOCs file similar lawsuits. The U.S. Justice Department and the NCTA file appeals.

A special three-judge district court upholds the 1992 Cable Act's must-carry provisions.

Congress introduces legislation to conditionally lift telco/cable cross-ownership bans. Other legislation removes state and local barriers to local telephony loop entry so cable operators can offer telephony services.

SportsChannel America and Prime Network merge to form Prime SportsChannel Networks.

Cable services adopt a four-point program and standards for limiting objectionable programming on cable networks, which leads to the industry initiative, “Voices Against Violence”.

Programming services proliferate as cable operators announce plans to introduce digital compression and launch new services to meet the FCC's per-channel benchmarks for rate regulation and must-carry retransmission consent agreements. Fox Network's FX, Food Television Network (Providence Journal), ESPN 2(ABC) and America's Talking (NBC) also gain commitments from MSOs eager to secure carriage agreements from broadcast network affiliates.

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DBS operators, DIRECTV and United States Satellite Broadcasting (USSB), sign deals to carry cable networks and films from Hollywood studios on their direct-to-home television services.

Time Warner Cable's New York 1 sells enough advertising and gains sufficient access to viewers and newsmakers, to ensure its success as a regional news network.

The FCC issues cable rate benchmarks in April and institutes a series of rate freezes. It requires systems to roll back customer rates, negotiate retransmission consent agreements with local broadcasters, rearrange channels to accommodate must-carry signals and add new satellite services required to reach FCC benchmark levels.

Must-carry retransmission consent negotiations begin. Network broadcasters demand cash payments from cable systems for carrying network stations. Cable systems agree to launch broadcaster-owned satellite networks in exchange for signal carriage. Unable to reach agreement, local broadcast stations in several markets force cable systems to drop their signals.

The Clinton Administration unveils its telecommunications policy and calls for fostering construction of a national "information superhighway" infrastructure. New FCC Chairman, Reed Hundt, makes stringent enforcement of the 1992 Cable Act a top priority.

The FCC plans to auction the Personal Communications Services (PCS) spectrum which could result in as many as seven wireless operators in a given market. License holders can team up to craft a nationwide wireless network.

1994

Strategic alliances between equipment vendors emerge. Siemens, Sun Microsystems and Scientific-Atlanta Inc. agree to create IMM Xpress. Phillips Consumer Electronics, Zenith Electronics Corp. and Compression Labs, Inc. develop a platform, and AT&T uses functionality from Broadband Technologies for fiber-to-the-curb development.

Cox announces a "ring-in-ring" topography which encloses households in double, self-healing rings. The design greatly increases reliability and meets telephone industry outage standards.

The international body of manufacturers, computer and telecommunications companies agree upon the MPEG 2 algorithm as the preferred way to compress and send digital TV signals.

Manufacturers begin to develop telephony over cable hardware and consequently face issues such as powering, redundancy and operational support.

The lengthy debate continues about whether the functionality of program guides and other interactive services should be located in the TV or in the set-top box. On one side are consumer

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electronics manufacturers, represented by the Electronics Industries Association. The cable industry is on the other side, represented by the NCTA. Each group wants the other to include the technology in their equipment.

Operators begin to consider deployment of regional networks using SONET and ATM (asynchronous transfer mode) technology.

Cable expands into telecommunications. Through ownership in Teleport Communications Group (TCG), the largest cable operators; TCI, Time Warner, Continental, Comcast and Cox enter the alternative access business. TCG provides access to their long distance companies for large business customers. A number of large operators have also bid on Personal Communications Services (PCS) licenses. MSOs begin to test cable modems. These translate computer tones electronically so they can be carried over coaxial cable and also provide access to online services.

The cable industry launches a first-of-its-kind partnership with the National PTA to address concerns about television violence and the impact of TV violence and commercialism on children. The Family and Community Critical Viewing Project train cable and PTA leaders nationwide on key elements of media literacy – to present community workshops to help families make better informed choices in the TV programs they watch.

High-power DBS service launches. DIRECTV, backed by the Hughes unit of General Motors, and Stanley Hubbard's USSB use RCA DSS systems carrying direct-to-home cable programming. Customers purchase the 18-inch parabolic dishes and receivers for as little as $850, including installation. By year-end, the service boasts 400,000 customers. Cable-owned, medium-power PrimeStar has about 200,000 direct-to-home customers.

Time Warner announces they will provide residential telephony services in all its clusters. The company reaches agreement with Rochester Telephone to provide telephone service. Rochester Telephone begins its active video trial.

Southern New England Telephone begins a video dial-tone test in Hartford, Connecticut using programming provided by CAI Wireless, an MMDS operator.

Upfront advertising sales on cable networks surpass $1 billion. Overall ad spending on cable reaches $4.6 billion.

U S West Communications buys 446,000 Atlanta-area cable customers from Wometco Cable Corp. and Georgia Cable TV for $1.2 billion. U S West, which owns a 25 percent share in Time Warner Entertainment, also discusses buying Continental Cablevision.

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Viacom Inc. outbids QVC Inc. to acquire Paramount Communications for $10 billion. Viacom merges with Blockbuster Entertainment Corp. and sells one-third of its assets in Madison Square Garden.

Five months after the TCI and Bell Atlantic merger announcement, the deal collapses. Likewise, the Cox Cable and Southwestern Bell $5 billion merger falls apart. However, Cox announces a $3.2 billion merger with Times Mirror Cable TV to create a 3.1 million-subscriber MSO. U S West invests $2.5 billion for a 25 percent interest in Time Warner Entertainment. Several other MSOs opt out of the business rather than invest significant amounts of cash needed to rebuild and upgrade in the face of competition from telcos, MMDS operators and DBS companies. Among those selling off cable TV system interests are Newhouse, Times Mirror, Viacom, Crown Media, Colony, Telecable, Tele-Media, Wometco, Maclean Hunter and Cablevision Industries.

The Supreme Court remands the must-carry case back to the lower courts, while again stating that cable has certain First Amendment protection. (*Turner Broadcasting v. FCC*) Suits challenging provisions of the 1992 Cable Consumer Protection Act provisions move forward.

Federal courts allow telcos into the cable programming business.

Fledgling networks fail to materialize (The Shopping Network, TV Macy's and on Q). Others postpone launch (Classic Sports Network, The Golf Channel, La Cadena Deportiva, BET on Jazz and The History Channel). Some “go dark” (e.g. Americana Television Network), as MSOs halt launches while the FCC takes nine months to develop financial incentives to justify new launches.

MSOs increase PPV by rebuilding systems and launching additional channels. Major MSOs test near video-on-demand. They allocate 10 to 30 channels with half-hour start times for hit movies; achieving buy rates from 200 -250 percent, compared to 20 percent buy rates in systems with only two to three dedicated PPV channels.

Movie studios extend home video windows from 60 to 90 days before allowing PPV release of recent movies.

For the first time in at least a decade, ad-supported cable networks ratings show no growth while the three major broadcast networks boost their combined audience growth. A large part of the networks' gains are due to the Winter Olympics and cable re-regulation's impact on channel alignment.

Must-carry retransmission consent players launch FX, America's Talking, ESPN 2 and Home and Garden Television Network (HGTV).

Direct Broadcast Services DIRECTV and USSB are launched nationally and provide cable programming to customers.

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American Movie Classics is awarded a Cable Golden Ace Award for The First Annual Film Preservation Festival, dedicated to the protection of American film history. Celebrating a “Decade of Dedication to the Classics”, the network reaches a subscriber level of 50 million viewers.

Rainbow launches The Independent Film Channel (IFC), the first and only network dedicated to showcasing films made outside the traditional Hollywood system. IFC debuts with the support of a distinguished advisory board including Martin Scorsese, Spike Lee and Robert Altman.

MuchMusic, the alternative concept in music television, debuts in the United States through a partnership between Rainbow and the Chum Television Group of Toronto. Bravo, in partnership with the Chum Television Group, is awarded one of six licenses to launch Bravo! for Canadian distribution.

Rainbow launches NewSport, the first 24-hour sports news network, to 7 million subscribers. The Sega Channel launches in December.

The FCC establishes a Cable Bureau and releases its going-forward rules. Operators may collect 20 cents per month for each channel added to regulated tiers for up to six new basic channels over a three-year period. The rules also allow operators to create unregulated new product tiers for new niche services. Many planned network services are unable to get funding due to the FCC's restrictive regulation.

Subscriber rates are rolled back a second time. The FCC is unable to respond to 4,500 of the 6,500 rate complaints filed during the year.

The FCC uses Section 214 to establish its oversight of "video dial tone" (VDT). Telcos file a number of applications to construct VDT systems instead of seeking cable franchises from local regulatory authorities.

1995

Cable modems emerge as a top priority for the industry. Comparisons between copper-wire phone lines at 14.4 kps, ISDN phone lines at 128 kps and coaxial cable at 4,000 kps, dramatically illustrate the 1,000 times faster speed of cable.

U S West begins its analog, digital and analog VDT test in Omaha, Nebraska.

Cable operators, including Time Warner, begin testing telephony in cable systems.

Increased awareness of programming from DIRECTV and USSB advertising also increases cable customers. There are more than 62.1 million cable customers, 2.2 million authorized DBS customers and more than 670,000 MMDS customers.

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RBOCs begin strategic significant investments in wireless cable systems in order to immediately enter the video entertainment market. MMDS companies acquire badly needed capital to invest in digital compression technology in order to expand beyond 20 to 30 channels of programming. Bell Atlantic Corp. and NYNEX Corp. invest up to $100 million in CAI Wireless Systems, Inc. Pacific Telesis agrees to pay $175 million for Cross Country Wireless Cable in Riverside, California; and another $160 to $175 million for MMDS channels owned by Transworld Holdings Inc., Videotron Inc. in California and other locations.

Telcos generally abandon the VDT strategy established in Section 214 of the Communications Act. Citing FCC approval delays, they apply for cable franchises. Ameritech acquires franchises in Ohio.

Cable mergers and consolidations escalate. Time Warner announces a merger with Turner Broadcasting which sets off a legal battle with Time Warner's partner, U S West. Among those leaving the industry are Colony, Sammons, Columbia International, Gaylord, United Video Cable, Multimedia, Douglas, Greater Media and Scripps-Howard. MSOs trade systems to consolidate media markets for management efficiencies and to introduce services like telephony and high-speed cable modems, which offer access to the Internet at 1,000 times the speed of a conventional telephone line.

Time Warner's Full Service Network (FSN) in Orlando reaches its 4,000 customer goal. Other MSOs continue two-way upgrades with fiber optics and digital switches to prepare for telephone and data services.

The NCTA coordinates a high-profile, customer service initiative, the "On-time Guarantee" program. National advertising and support materials for local advertising communicate the industry's dramatic improvements in service and are responsible for improving customer attitudes toward cable.

Women in Cable changes its name to better reflect the industry's evolution and future opportunities. SCTE and CTAM follow suit. The results are Women in Cable & Telecommunications (WICT), Society of Cable Telecommunications Engineers (SCTE) and Cable & Telecommunications: A Marketing Society (CTAM).

In partnership with ITT, Rainbow Programming purchases the Madison Square Garden Corporation. The deal includes the MSG Network as well as the Knicks and Rangers.

A number of states repeal laws banning cable operators from offering telephony services.

The FCC releases going-forward rules for rate regulation which lead to growth for a number of networks, as systems are able to add new channels and pass the costs on to customers.

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Programming networks launch online services to complement programming and reach computer users. Interest in the Internet takes off and World Wide Web pages become promotional tools, as well as sources for programming schedules and information.

“Cable in the Classroom” grows to 32 network members and more than 8,400 cable systems provide high quality, educational programming to more than 70,000 schools reaching more than 38 million students across the country.

More than 50 networks in the industry step up to the rising criticism of objectionable programming with “Voices Against Violence Week.”

The seven-month O.J. Simpson trial introduces millions of new cable viewers as CNN, Court TV and E! provide live coverage and analysis.

The FCC begins auctioning the PCS spectrum. It also changes its cost-of-service rules which provide cable operators with an alternative to the benchmark formula for calculating maximum permitted rates.

High Definition Television (HDTV) is subject to delays amid Congressional and industry debate on various issues.

In order to settle the outstanding number of rate complaints in a timely manner, the FCC enters into "social contracts" with major MSOs. In exchange for subscriber refunds, stable prices and commitments to rebuild systems and increase channel capacity, the FCC agrees to stop rate proceedings. Time Warner Cable and Continental Cablevision enter into such agreements. Comcast, Cablevision Industries, Tele-Communications, Inc., Cox and Cablevision Systems reach more limited settlements of rate complaints with the FCC.

1996

Bell Atlantic launches the first commercial VDT network in Dover Township; delivering voice, data and video elements. Each neighborhood node sends signals to an optical network unit (ONU). Voice service is split off and sent to a twisted pair wire − video is converted to electrical signal and carried into the home via coaxial cable.

Cable enters the high-speed online data business when Tele-Communications, Inc. rolls out its @Home service in San Francisco. Also, Time Warner Cable launches Road Runner in Akron and Canton, Ohio. By year-end, six of the 10 largest MSOs launch commercial cable modem service and two more announce plans for high-speed service. Over 100,000 modems are deployed by cable systems in 1996, including dial-up modems.

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TCI launches “Headend in the Sky” and places digital boxes in its Hartford, Connecticut system. Other MSOs, including Cox, Comcast, Time Warner and Canada's Shaw Cable Communications, move towards the digital arena with their own approaches.

Sprint Spectrum rolls out digital wireless PCS technology service in the Washington, D.C./Baltimore market.

Financial transactions in the communications industry total $113 billion in 524 deals; the first time the industry surpasses $100 billion in a calendar year. A total of 15 reported deals are valued at $1 billion or more, capped by Walt Disney Co.'s $19 billion acquisition of Capital Cities/ABC and U S West Media Group's $10.8 billion purchase of Continental Cablevision.

Ad sales growth jumps significantly due to the proliferation of digital ad insertion and interconnects, the migration of viewers to cable and the concerted efforts of the cable rep firms. The year's spot revenue totals $192.6 million.

The cable industry announces an unprecedented education initiative; built on the foundation of the “Cable in the Classroom” initiative. The commitment requires cable companies introducing high-speed digital data services to equip at least one site in every consenting elementary and secondary school passed by cable, with a cable modem providing basic high-speed access to the Internet free of charge.

DBS emerges as a serious threat to cable. AT&T invests more than $137 million in DIRECTV. EchoStar Communications Corp. launches its high power service, DISH Network, which offers similar programming at prices below DIRECTV and USSB. AlphaStar Digital Television also launches. DBS providers end the year with 4.3 million subscribers; almost double the industry's 1995 total. A price war between the competitors slashes small dish prices to $149.

The three RBOCs backing Tele-TV’s plan to scale back their ambitious television programming venture. Bell Atlantic and Nynex also "suspend" their business agreement with CAI Wireless, dropping plans for a spring 1997 launch of digital MMDS systems in Boston and Hampton Roads, Virginia. Pacific Telesis also scraps its $175 million deal to buy wireless systems in San Francisco, Seattle, San Diego, Tampa and other markets. BellSouth continues to pursue MMDS by acquiring the rights for licenses in Atlanta, Miami and New Orleans. BellSouth Corp. agrees to pay $12 million for MMDS channels in New Orleans.

Though most RBOCs shift focus from overbuilding cable systems to concentrating on opportunities to develop a long distance business, Ameritech captures 27 cable franchises and turns on video-delivery service in the Chicago, Cleveland, Columbus and Detroit markets. BellSouth wins 11 cable franchises and starts service in suburban Atlanta and Southern New England with plans to turn on cable service in Connecticut in 1997.

GTE passes 96,000 households in Clearwater, Florida and announces plans to build video networks in 66 markets reaching seven million U.S. households by the year 2003. Otherwise,

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PacTel Video Services begins offering 71 channels of cable service in direct competition with TCI in San Jose, California.

Tele-Communications, Inc. and Viacom Inc. complete a complicated $2.3 billion stock swap deal to transfer Viacom's cable properties to TCI.

TCI sells Carolco Pictures to Rupert Murdoch's News Corp. for $50 million.

The Telecommunications Act of 1996 passes Congress and is signed into law on February 8, signaling a new era in U.S. communications. It immediately deregulates rates for small cable systems. It removes entry barriers and requires RBOCs to open up their markets to competition. AT&T begins to offer local telephone service and the RBOCs prepare plans to offer long distance services.

U.S. District Judge, Harold Greene, officially terminates the consent decree, which governed the 1984 breakup of the Bell Telephone System.

A federal appellate court upholds rate regulation under the 1992 Cable Act and finds that the Act did not violate cable's First Amendment rights. It holds that the FCC's rulemaking in certain instances under the 1992 Act was flawed. *(Time Warner Entertainment v. FCC)*

The U.S. Supreme Court holds that the First Amendment is violated by sections of the 1996 Telecommunications Act: 1) requiring operators to separate "patently offensive" material on one channel, to block the channel, and then to unblock it within 30 days of a customer's written request; 2) allowing operators to ban pornographic material on public access channels. In the same case, the Court upholds a provision permitting operators to prohibit pornographic programming on leased access channels.

NBC and Microsoft launch a 24-hour news network, MSNBC Cable, which replaces America's Talking network that relies on retransmission-consent for distribution. The July launch includes a simultaneous launch of a complimentary World Wide Web site on the Internet.

For the week of August 12th, basic cable prime time ratings rose to a record 41 share, topping for the first time the aggregate share of the three broadcast networks which turned in a 37 share, according to Nielsen Media Research data. Basic cable's ratings were 21.7, up 22 percent over 17.8 in 1995. Those ratings compare to a 19.7 for the three broadcasters, down 21 percent from the 24.7 they scored the previous year.

Mergers dominate the marketplace. On the programming side, The Walt Disney Company acquires Capital Cities/ABC and Westinghouse Electric Corp. acquires CBS. The RBOCs Pacific Telesis and SBC Communications, as well as Bell Atlantic and NYNEX, announce mergers. U S West announces an acquisition agreement with Continental Cablevision. British Telecom announces plans to buy MCI Communications. In the Time Warner Entertainment-Turner

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Broadcasting merger, Ted Turner will be vice chairman of Time Warner and CEO of a new video division that includes Turner Broadcasting's networks, HBO and TWE's Court TV stake.

More than 30 cable networks have World Wide Web sites.

Retransmission consent agreements proceed without serious problems. CBS announces its service developed for retransmission consent negotiations, “Eye on People”, will launch in 1997.

The MPAA/NAB/NCTA proposed age-based TV-ratings system is announced. Many cable networks voluntarily implement the ratings codes to prepare for the Telecommunications Act of 1996 requirement that new TV sets be equipped with "V-chips" by 1998.

Mind Extension University is repositioned into four business units to take advantage of relative strengths of communication technologies. The TV Network is re-named Knowledge TV. JEC College Connection shifts to greater use of the Internet as a primary means of course delivery.

Continuing its world-wide expansion, Bravo launches Bravo Brazil, the first film and arts network in Brazil, under a strategic alliance with TVA Sistema de Televisao and Film & Arts, a Bravo Company Network, which will be available throughout Latin America. The expansion will feature Bravo's award-winning animation to brand the services as the premier arts network in Latin America.

Rainbow launches News 12 New Jersey, New Jersey's first and only 24-hour local television news channel. News 12 New Jersey is a joint venture between Rainbow Programming and Newhouse Communications, the parent company of The Star Ledger.

In order to facilitate and accelerate the deployment of DBS, the FCC unanimously approves preemption of local zoning regulations that restrict dish placement. The FCC proposes to preempt private restrictions (i.e., condo associations, planned communities, covenant restrictions).

The FCC auctions MMDS licenses, PCS and DBS frequencies. At 136 days and 181 rounds from start to finish, the wireless cable auction was the longest in FCC history, raising $216.3 million for 493 Basic Trading Area (BTA) authorizations. The PCS auction raised $10.2 billion.

The FCC is tasked with implementing scores of different proceedings from the Telecommunications Act of 1996. In August, it approves an Interconnection Order to facilitate cable operator entry into telephony. However, in an appeal from the RBOCs, a three-judge panel of the U.S. Court of Appeals for the Eighth Circuit in St. Louis halts the FCC order that seeks to open RBOC telephone markets to competition.

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The first public HDTV broadcast in the United States occurs when the Raleigh, North Carolina television station WRAL-HD begins broadcasting from the existing tower of WRAL-TV.

1996-97

TCI and Time Warner delay planned launches of telephony services to cable subs in several markets; Cox and Adelphia Communications maintain their telephony roll out plans. Delays are due primarily from an uncertain regulatory climate. Technology for telephony over an HFC network is plagued by concern about powering and reliability regarding 911 and Enhanced 911 services. They launch using traditional fiber and twisted-pair cable.

1997

CableLabs takes an active role in bringing manufacturers and operators together to develop effective, interoperable technical standards for equipment. The two projects are Multimedia Cable Network System (MCNS) and Data Over Cable Service Interface Specifications (DOCSIS) certification process for cable modems and the OpenCable project. OpenCable leads to open, interoperable, digital set-top boxes costing under $300. Marketed directly to customers, local operators sell cards so subscribers can activate the boxes.

Dense Wave Division Multiplexing (DWDM) is originated to push advanced offerings, including high-speed data over existing fiber optic networks; thus saving the cost of tearing out plant or adding fibers. This technology multiplexes several wavelengths of light into one optical fiber at 1550 nm to minimize loss. The result increases the network's capacity many times over.

Time Warner shuts down its Full Service Network in Orlando, Florida at year-end. It will use technical and marketing data gathered from the 750 MHz HFC system to launch its Pegasus digital product in cable systems nationwide.

Several cable operators sign interconnection agreements with RBOCS to launch integrated packages of voice and video services.

On July 1, an agreement signed by The National Cable Television Center and Museum, the Cable TV Pioneers and Penn State, provides for the relocation of financial assets and collections of The Center Library and The Center Museum from Pennsylvania to Denver. Interim offices for the Denver location had been established earlier.

Cable stock prices increase, partly as a result of Microsoft Corporation's $1 billion investment in Comcast Corporation which endorses the cable industry's broadband technology and highlights

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the industry's potential. Cable cash flow growth rebounds encouraging outside investors, including The Carlyle Group, Robert Bass's Keystone and the Blackstone Group, to pour money back into cable. TCI stock price climbs nearly 65 percent from $14 a share in December 1996 to $23 per share by December 1997.

The cable industry invests over $5 billion in upgrading its equipment to push quickly into high-speed data and digital service. Almost 100,000 customers in 29 states have two-way cable modems. Biggest services which announce an alliance are Time Warner's Road Runner and MediaOne.

Cox Communications becomes the first company in the U.S. to offer telephone service over cable lines, introducing service in the Phoenix area in March. Cable telephony is later launched in several markets by MediaOne, Cablevision, Jones and Adelphia.

Total advertising revenue jumps, reflecting cable's consistent ratings increases and recognition by the advertising community. Local spot revenue rose 15 percent for a total of $1.912 billion or $29.09 per subscriber. The top 25 basic cable advertisers accounted for about 1/3 of the total revenue. The top three advertisers are Proctor and Gamble ($214.4 million), Time Warner ($118.6 million) and AT&T ($93 million).

The $10.8 billion merger culminates in late 1996 between Continental Cablevision and U.S. West Media Group Inc., which changes its name to MediaOne Group, Inc. and moves its headquarters from Boston to Denver. As a result, Continental founder and CEO, Amos Hostetter, along with several top executives, decline to move and exit the company. U.S. West also announces it will split its telephone operations from its five-million subscriber cable MSO.

In a major financial restructuring effort, TCI joint ventures with several cable MSOs to swap and transfer four million of the company's 14 million subscribers and its $5 - $6 billion in debt. Major deals include transferring 445,000 subscribers to Bresnan Communications, 268,000 subscribers to InterMedia/Blackstone Group, 613,000 subscribers to Time Warner Cable, 820,000 subscribers to Cablevision Systems Corp. (New York) and 542,000 subscribers to MediaOne (Chicago). When all the deals are completed, Time Warner will become the largest MSO with 13 million customers, while TCI will fall to about 10 million customers.

Bell Atlantic Corp. and Nynex Corp. complete their merger, just hours after FCC approval. The new company is named Bell Atlantic and promises to roll out a more robust video product in 1998, including a full-service fiber optic network in Philadelphia that delivers telephony and video.

Programmers, including MTV Networks, Inc., The Walt Disney Co. and Lifetime plan to roll out digital channels; anticipating the abundance of channels cable operators will have in 1998 as they introduce digital tiers of programming. More than 10 million households were passed by digital cable by year-end.

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TCI sells its SummiTrak customer care and billing software platform for $106 million, plus $26 million in contingent payments to CSG Systems International. (TCI had been a rival billing company and Cable Data's biggest customer). When CSG consolidates TCI's 13 million customers into its CCS system, it nearly triples its business and will serve 27 million cable subs – 41 percent of all customers in the United States.

WorldCom agrees to acquire the infrastructure of top Internet Service Providers (ISPs), American Online and CompuServe, creating a powerful broadband networking company which plans to market Digital Subscriber Line (DSL) Internet access offering voice and high-speed data with one telephone line. WorldCom previously acquired MFS Communications and UUNET and will now oversee the world's biggest Internet network.

A panel of three federal judges in Delaware strikes down as unconstitutional, Section 505 of the Communications Decency Act of 1996, which requires cable operators to fully block or scramble channels primarily dedicated to sexually explicit programming or carry such channels only during times when children are unlikely to view it. The Court holds that Section 505 violates the First Amendment because a less restrictive alternative is available, namely Section 504, which requires systems to block channels for individual customers upon request. The government appeals the decision to the Supreme Court, which later affirms the decision of the Delaware court. (*Playboy Entertainment Group, Inc. v. United States of America*)

In a 5-4 ruling that surprises the cable industry, the Supreme Court upholds must-carry, in spite of swing-vote Justice Stephen Breyer's note that it "extracts a serious First Amendment price." It also solidifies the broadcast industry's grip on one-third of cable's analog signal capacity. The implications for how the rules apply to digital services, especially DBS, are unclear. *(Turner Broadcasting System v. FCC)*

A federal appellate court upholds a preliminary injunction that prevents New York City from using government access channels on Time Warner Cable systems to offer general and business news cable networks. *(Time Warner Cable v. Bloomberg LP)*

A federal court affirms the town of Sturgis, Kentucky's decision not to renew the cable franchise with Union CATV, because the operator lacked the facilities to meet the community's needs. The decision solidifies cable's right to take franchise-renewal disputes to court. *(Union CATV, Inc. v. City of Sturgis)*

Cable operators invest over $6 billion to deploy two-way broadband via high-speed cable modems, according to the NCTA.

ESPN outbids Fox Sports, the joint venture between News Corp. and TCI's Liberty Media Group, to buy Classic Sports Network for $170 million. ESPN2 passes the 50 million household mark just 47 months after its launch.

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Cablevision Systems Corp. chairman, Chuck Dolan, and his son, CEO Jim Dolan, increase their ownership of Madison Square Garden to 89 percent with an additional $500 million; sell 40 percent of Rainbow Media Holdings Inc.'s sports channels to News Corp. and TCI's Liberty Media Group for $850 million. They also plan to buy Radio City Music Hall.

After a two-year court battle, Seagram pays Viacom Inc. $1.7 billion to acquire the 50 percent stake in USA Networks it doesn't already own, reducing Viacom's $17 billion debt. Subsequently, Barry Diller's Home Shopping Network announces an agreement to buy USA Networks (USA and Sci-Fi Channel) and other Universal TV assets from Seagram for $4.1 billion.

A Cable Ad Bureau analysis of data for the 1996-97 broadcast season reveals the average cable home watches 24.4 hours per week of basic cable and 24.2 hours per week of broadcast programming.

MSNBC surpasses its startup goal of 35 million households by 2000. The network reaches 38 million households and expects to hit 60 million by 2000.

Showtime Networks, Inc. secures an exclusive agreement to acquire MGM titles released theatrically through Dec. 31, 2003; extending a previous agreement dating back to 1994.

The PPV industry's annual revenue is over $1.2 billion; more than doubling since 1994. Movies account for $603 million, events $413 million and adult programming $253 million.

Time Warner announces it will exercise its option to purchase Southern Satellite Services, Inc. (which distributes TBS Superstation), from Liberty Media Group for $213 million, as part of the conversion of TBS into a basic cable network.

U S West Interactive Services launches Dive-in, a localized Internet-content service, in five cities served by US West Media Group's Continental Cablevision Inc. or MediaOne cable systems, and also in five cities served by US West. The principal launches are in Atlanta and Denver.

Nearly 100 cable networks participate in "Tune in to Kids and Family Week," an unprecedented showcase of the best kids and family-friendly programming on cable. Events include original programming, a live Town Hall meeting about the impact of television, hosted by Linda Ellerbee, and hundreds of grassroots events conducted by local operators.

The Clinton Administration plans to raise $26.1 billion from auctioning spectrum. The largest block, $14.8 billion, would come from broadcasters' analog channels that would be returned to the FCC once the transition to digital is complete.

Following a Supreme Court ruling, the FCC hands down an order implementing Section 505 of the Telecommunications Act which requires all cable operators to completely scramble adult programming or place it in the safe harbor hours (10 p.m. to 6 a.m.).

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The FCC gives the industry a setback with a precedent-setting case in Troy, Michigan. Cable operators will be forced to obtain new franchise agreements for upgrading plants to offer telephony. However, the FCC also found the City of Troy violated federal law by trying to impose a telecommunications condition on cable construction.

The FCC approves the British Telecom/MCI $23.7 billion merger, giving PrimeStar access to key transponders, enabling them to plan for a high-power DBS service launch.

The FCC releases inside wiring rules which allow landlords and apartment building owners to manage the disposition of broadband wiring. The rules allow the operator to remove, abandon or sell the wiring to the new video service provider once a landlord terminates a contract with the cable operator.

1998

CableLabs formally celebrates its 10th Anniversary with a celebration in June at SCTE's Cable-Tec Expo held in Denver. CableLabs also has an extremely busy year leading the industry through the rigorous certification program to standardize cable modems for official DOCSIS certification. Only one cable system, Cogeco Cable, Inc. in Ontario, Canada began deploying DOCSIS technology using Samsung and Cisco equipment as part of CableLabs' trial.

CableLabs also spearheads agreements from a dozen companies to participate in a royalty-free pool for intellectual property rights in developing PacketCable inter-operable interface specifications. Products meeting these requirements will allow cable operators to use Internet Protocol (IP) technology to deliver telephone calls, videoconferencing and other advanced packet voice and video services over two-way cable networks.

The cable and consumer electronics industries reach agreement over the IEEE (Institute of Electrical and Electronic Engineers) 1394 "FireWire" standard to promote compatibility between digital set-top boxes and broadcast digital TV signals. (The name implies the speed of data sizzling over wire fast enough to set the wire on fire). Though not a final answer, it is a first step. An informal copy protection technology working group identifies the 5C standard for digital transmissions, which helps CableLabs draft final OpenCable specifications.

Cable systems continue to upgrade, investing nearly $8 billion in infrastructure improvements and activating reverse path for two-way services like high-speed data and telephony. Between 40 and 65 percent of U.S. plant is able to offer two-way services.

A cross-industry group, Advanced Television Enhancement Forum (ATVEF) drafts enhanced TV specifications, an interactive format that facilitates blending the World Wide Web into TV and TV into the Web.

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TCI forges agreements with Sun Microsystems for the Personal Java software platform and with Microsoft for its Windows CE operating system to be used in digital set-top devices. It also selects Microsoft's HDO high-definition TV format to incorporate into TCI OpenCable boxes, enabling consumers to better see digital pictures and programs without having to buy a $6,000 television set.

Microsoft co-founder, Paul Allen, acquires Dallas-based Marcus Cable Partners for $2.8 billion and three months later, Charter Communications for $4.5 billion. Marcus closes its corporate offices and the combined MSO is headed by Charter executives Jerald Kent, (CEO) and Barry Babcock, (chairman) in St. Louis. By year-end, Century Communications Corp. declares it is exploring strategic alternatives, including selling its systems, after talks end with Allen's Vulcan Ventures.

The cable industry commemorates 50 years with a number of events and activities. In May, The Cable Center (formerly The National Cable Television Center and Museum) inducts the first six members of the Hall of Fame at the NCTA Convention in Atlanta. By year-end, The Cable Center announces it has raised $50 million in a capital campaign to build a 75,000 square foot state-of-the-art facility on the campus of the University of Denver.

Mergers again dominate the year's activity, headed by the announcement of a $48 billion AT&T/TCI merger. AT&T also pays $10 billion for an alliance with British Telecom and buys Teleport Communications Group from TCI, Comcast and Cox for $10.3 million, which gives direct access to local phone customers using TCG fiber network in 60 cities.

WorldGate announces the first commercial deployment of its Internet/television service on cable systems in Charter Communications' Newton, Connecticut system and Prestige Cable's system in Mooresville, North Carolina; collectively passing more than 80,000 households.

Public Affairs executives from MSOs form The Cable Broadband Forum for the purpose of convincing the general public that high-speed Internet access is better through cable than telephone lines.

Advertising spending on subscription video services rises 17.67 percent in 1998 to $9.4 billion. Cable network ad revenue rises over $1 billion to $6.9 billion. Local advertising rises to $2.1 billion and advertising on regional sports networks increases to $305 million. Kraft Foods and TCI announce a multi-million dollar agreement to run digitally inserted ads in 20 metropolitan markets to develop customized ad applications. Eventually, ads could be targeted to neighborhoods, individual homes and perhaps specific TV sets. Time Warner Cable pulls out of the New York Interconnect, ending a one-stop-shop for spot cable time in the largest television market.

Turn-key ISPs proliferate. Leading the pack is High Speed Access Corp. (HSA Corp.), which merges with CATV.net and gets an infusion of $20 million from Paul Allen's investment

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company, Vulcan Ventures Inc. Other leading ISPs are SoftNet's ISP Channel, Online System Services, (which renames its service i2u), Internet Ventures, Inc. and Convergence.com Corporation. Paul Allen also invests $10 million in the interactive programmer, Wink Communications Inc. and $54 million for a 33 percent stake in ZDTV, the cable network focused on computers and the Internet.

RCN Corp. shows its competitiveness by building OVS systems on top of Time Warner and Cablevision in New York City and Boston, and signs a venture with Potomac Electric Power (PEPCO) to build cable, telephone and Internet services under the name Starpower Communications.

NCTA announces an industry commitment to provide a free cable modem and Internet access service to elementary and secondary schools and libraries in markets where high-speed data service is offered by the local cable companies. By year-end, more than 2,500 schools and 700 communities are connected to the Internet through cable modems. Millions of dollars are collected in fees from telecommunications companies to subsidize Internet hookups for schools and libraries, but does not disburse the funds.

The Wireless Cable Association replaces "Cable" with "Communications" in its name to reflect member activity to deliver broadband services, including Internet services.

Citing technical issues, market dynamics and new competition, Bell Atlantic declines to pursue video deployments beyond its Dover Township, New Jersey test market and pulls out of a $100 million investment in the CAI Wireless as it shifts attention to DSL deployment.

Time Warner and MediaOne Group combine their data venture operations and move Road Runner headquarters to northern Virginia. With a $425 million investment from Microsoft and Compaq, the service passes 180,000 subscribers for high-speed data services, including a 37-story high-rise in Jacksonville, Florida. Cablevision launches Optimum Online, cable modem service for residential subscribers.

@Home, TCI's high-speed Internet access service, signs up more than 300,000 customers with major cable affiliates – TCI, Bresnan, Cox, Comcast, Cablevision, Century, Intermedia, Jones, Rogers and Shaw. It also targets smaller cable systems to compete with turn-key ISP vendors. Demand is so strong that incidents of congestion from too many simultaneous users are reported. The business division of @Work is also successfully marketed and signs an agreement with PC Connection, a computer reseller, to provide corporate customers with Internet connectivity.

@Home is the first high-speed Internet service to announce a deal with Compaq to bundle access to @Home on Presario Internet personal computers. Dell Computer Corp. announces alliances with telcos to provide DSL-compatible equipment to consumers and with @Home to

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coordinate installing the cable-delivered, high-speed service in custom-built computers after purchase.

The only operating LMDS provider, Cellular Vision of New York, is financially strapped and declines to participate in the 127 round auction for LMDS spectrum in nine markets. The auction still raises $578.6 million from WNP Communications, NEXTBAND Communications, Winstar LMDS, Baker Creek Communications, Cortelyou Communications and other companies anxious to offer voice, video and data using wireless technology.

The myriad of mergers, acquisitions and reorganizations results in a number of upheavals for long-time industry executives. Among the highest profiles leaving their positions are Kay Koplovitz, the founding chair and CEO of USA Networks, and Geraldine Laybourne, who leaves Disney/ABC Cable Networks. Other executives separated from their long-time positions include Jim Heyworth, Viewer's Choice CEO; Doug Herzog, Comedy Central President; Rich Cronin, President of Nick at Nite/TV Land; Doug McCormick, with Lifetime; Erica Gruen of TV Food Network; and Lee Masters, CEO of E! On the operator side, Marcus Cable executives Jeff Marcus and Lou Borrelli leave long-time positions.

Women's compensation in the cable industry comes up short. A salary survey conducted for the Women in Cable & Telecommunications Foundation indicates women in the programming industry are paid about 18 percent less than men in the same position, while women working for video distribution services earn about 15 percent less than their male counterparts.

Comcast Corporation pays $500 million for Bell Canada's 30 percent stake and then picks up its option early to take control of Jones Intercable by acquiring Glenn Jones' 2.9 million shares for $200 million in a deal scheduled to close the first quarter of 1999. Comcast also purchases cable systems near Washington D.C. and Chicago from Prime Cable; making a total of 1.1 million subscribers in the Baltimore-Washington area, including the properties Prime purchased from telco, SBC.

In the first six months, leading cable brokerage firm, Daniels & Associates, reports a record 48 transactions with an aggregate value of $2.2 billion.
The telcos continue to consolidate. SBC Communications acquires Southern New England Telecommunications Corp. for $4.4 billion, and Ameritech Corp. (pending regulation approval), for $79 billion. Bell Atlantic purchases GTE.

Broadcast HDTV begins. Forty terrestrial broadcast television stations in 22 markets voluntarily launch digital programming in November. Televisions capable of receiving broadcast digital signals cost $5,000 - $10,000. The potential of applying must-carry rules to the new high-definition television signals spark intense friction between broadcasters and the cable industry. Groups representing both industries disagree about technical issues. Cable fights against forced carriage of any duplicated signals, including the broadcasters' analog signal -- broadcasters

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argue that cable will be a bottleneck without extending must-carry to digital signals, causing many stations to disappear.

Cable commits to telephony. By year's end, 200,000 lines of cable telephone service are offered via newly rebuilt, broadband HFC plants. Companies taking the plunge in at least one market are Cablevision Systems Corp., Comcast Corporation, Cox Communications Inc., Jones Communications Inc., MediaOne Group Inc., Rifkin & Associates, Tele-Communications, Inc., and Time Warner, Inc.

Cable modems are a hot commodity and consumer demand is high. In one day, CompUSA sells its entire inventory of General Instrument modems used in Daniels Cablevision's San Diego system. MediaOne Express subscribers in Massachusetts and New Hampshire buy cable modems for $250 in Circuit City retail stores, as MediaOne is the first MSO to launch a retail initiative with a national retailer. @Home announces an alliance with chain retailer, CompUSA, to sell @Home branded pre-installation kits. Lack of modem certification delays widespread retail sales of cable modems. Between 400,000 and 500,000 pre-DOCSIS standard cable modems are installed by the end of 1998; approximately two percent of the homes passed.

EchoStar Communications ends a $5 billion breach-of-contract lawsuit by signing a new deal to buy the satellite TV assets of News Corp. and MCI WorldCom Inc. for $1.25 billion of stock. (37 percent of EchoStar) The deal is announced following the dissolution of the PrimeStar/News Corp. alliance that was created in June 1997, just after the first EchoStar/ASkyB alliance dissolved. The second deal gives EchoStar chairman, Charlie Ergen, more control over the company with 40 percent of the equity and 87 percent of the voting interest. EchoStar will control over 50 of the 96 full-CONUS DBS frequencies available, as well as two high-power satellites ready to launch and a new satellite uplink center in Gilbert, Arizona. It plans to launch local broadcast network channels to half the country and provide high-definition television and data services through a single, small dish.

DBS providers reportedly pass the 10 million-subscriber mark at the end of October and mergers change the competitive landscape. DIRECTV strengthens its position as the largest provider, when its parent company, Hughes Electronics Corp., buys USSB's two million customers for $1.3 billion. Using a free dish offer, EchoStar grows by nearly two million customers and promises to be stronger with the additional transponders from the News Corp./MCI deal. The ailing PrimeStar has over 2.3 million customers and even C-Band has 100,000 more subscribers than in June 1994 when DBS debuted, though it dropped under two million subscribers for the first time.

Digital Cable exceeds expectations, growing to at least 1.5 million households by year-end. The average system offers an optional tier with 57 video channels and 24 audio channels. The leader, TCI's Headend in the Sky, with over 1.2 million customers in TCI and non-TCI systems, increases to 130 video channels and 43 audio services which it provides to 60 MSOs in 700 systems. Jones Intercable launches its first digital cable service, Impact TV in Pima County, Arizona.

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Time Warner Cable unveils its Athena service offered through "Pegasus" digital set-top boxes, which promises to be an advanced version of TCI's HITS and Digital cable service.

Basic cable growth slows to 1.3 percent on an annualized basis. MSOs concentrate on gaining incremental revenue from existing customers by selling more premium channels, tiered packages and digital service.

PCS appears to no longer be a central component of cable strategic plans. Sprint takes its wireless division public and assumes full ownership of Sprint PCS; exchanging the interests of part owners, TCI, Comcast Corporation, and Cox Communications, Inc., for low-voting shares of the tracking stock.

Cablevision Systems Corp. purchases The Wiz, a New York-area retail electronic store chain and hopes to maximize potential revenues with the purchase of Clearview Cinema Group (movie theaters). Cablevision will offer events from its famed Radio City Music Hall and Madison Square Garden facilities as part of a subscription/PPV package; including concerts and signature events such as Radio City's infamous Christmas show and Madison Square Garden's stage productions.

To fill a void created by AT&T selling its 2.5 percent stake in DIRECTV in December 1997 for $161.8 million, the DBS service signs multiyear marketing agreements with telephone companies GTE Corp., Bell Atlantic SBC Communications and MMDS operator, Heartland Wireless Communications.

TCI's United Video Satellite Group Inc. announces the acquisition of TV Guide magazine and related News Corp. assets; including The Prevue Channel, the leading analog-distributed guide channel, for $2 billion. TV Guide previously acquires TVSM Inc. for $75 million cash and launches a full-sized version of Total TV. TVSM also publishes the monthly Cable Guide and See (DIRECTV subscribers' guide) programming guides.

Telcos, including Bell Atlantic, Bell South Corp., GTE Corp., SBC Communications and US West, begin deploying DSL technology to launch data services in several markets to compete with cable modems. BellSouth's service is called FastAccess DSL. US West launches cable service over its existing phone lines in the Phoenix, Arizona market.

Broadcasters win over DBS interests on July 14, when a US District court in Miami issues an injunction ordering Primetime 24, a wholesale distributor of satellite television programming, to cut-off 1.2 million customers illegally receiving CBS and Fox network signals after March 11, 1999. If a household can get a Grade B off-air broadcast signal clearly at least 50 percent of the time, it is ineligible to receive network signals via satellite. In December, the Miami court issues a permanent injunction against Primetime 24, prohibiting delivery of illegal distant signals and ensuring that Congress must change the Satellite Home Viewer Act (SHVA) to avert DBS customer disruption caused by the loss of network signals. (*ABC, Inc. v. Primetime 24*)

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EchoStar Communications Corp. files a class-action lawsuit in a Colorado federal court against ABC, CBS, NBC and Fox broadcast networks; asking the court to declare its local and distant signals are legal under the SHVA. EchoStar also petitions the FCC, asking them to rewrite part of the SHVA. Broadcasters oppose the plan, fearing they would lose advertising if DBS offers distant network signals in place of local network affiliates. The FCC declines to act, citing lack of statutory authority under the SHVA to prevent customers involved in the court cases from losing services. The FCC does, however, revise its rules to simplify how Grade B contours are determined. (*DIRECTV, Inc. v. FCC*)

The Iowa Supreme Court hands Tele-Communications, Inc. a temporary victory in the ongoing battle against municipal overbuilds. It rules that Section 23A.2 of the Iowa Code prohibits municipalities from operating telephone systems as public utilities, as a 1993 law allows cities to offer telecommunications services, including cable, but not to telephone. The decision overturns a lower-court ruling, finding the town of Hawarden is precluded by statute from offering local telephone service to residents. (*Iowa Tel. Association v. City of Hawarden*)

Cablevision of Boston sues Boston Edison and RCN in federal court for building a commercial telecom network in Boston using electric utility regulations, yet not fulfilling the same requirements and burdens as the city applies to cable operators. The suit charges the city approved retroactive permits for the initiative so Edison and RCN could avoid delays and costs, thus violating the Telecom Act's Section 253 which requires local authorities to be "competitively-neutral and non-discriminatory" in their rights-of-way policies. (*Cablevision of Boston, Inc. v. Public Improvement Comm'n of Boston*)

With the increase of copyright payments of $.27 per signal for DBS companies, up from $.06, the U.S. Copyright Office income from DBS providers for the first half of 1998 is $50 million, compared to $17 million in the same period in 1997.

In the first decision to test a U.S. Supreme Court ruling that lets operators ban indecent content on leased-access channels, a U.S. District Court rules that Time Warner didn't violate the first amendment when it banned three episodes of a leased-access program filmed at a Rochester strip club. (*Loce v. Time Warner Advance/Newhouse Pshp.)*

The City of Austin files a lawsuit against SBC's Southwestern Bell Video Services, alleging the company is a "cable operator" and therefore should pay franchise fees. (*City of Austin v. Southwestern Bell Video Services*)

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The Fifth Circuit Court of Appeals rules in September of 1996 that Telecom Act's special provisions which deny telco entry into long distance service are constitutional. (*City of Dallas v. FCC*).

Citing recognition in more prestigious award arenas including the Emmys, Peabody Awards and Golden Globes, the National Academy of Cable Programming and the NCTA's Satellite Network Committee cancel the National CableACE Awards. Recognition of outstanding local programming will continue through the local Community Spirit Awards.

ESPN2 attains 60 million subscribers in 60 months, making it the fastest growing basic cable network in history.

Request TV officially closes its doors, not merging with Viewer's Choice as previously speculated. Ingenius, the descendant of X*PRESS, the first push technology via cable to personal computers, also ceases operations in January.

Barry Diller purchases Universal Studios' TV assets, including USA Networks for $4.1 billion, to leverage his Home Shopping Network and combine transaction (franchise-branded merchandise) with the entertainment business.

Though the industry is focusing on high-speed data, cable continues to serve 65 million cable homes who watch 7 ½ hours of programming a day. The Internet, with its explosive growth, is still used under 45 minutes a day in 20 million homes.

Q2, the upscale version of QVC, fails (after four years) to gain more than six million customers. Style, the fashion network launched by E! Entertainment Television, takes over Q2's transponder.

MTV announces plans to develop a special, multi-media version of the MTV Online Website for @Home's cable modem subscribers; which will include such video and multimedia features as MTV News clips, top 20 music videos, “Daria” and “Beavis and Butt-Head” clips.

CBS Corp. first relinquishes control and then sells, its entire interest in CBS’ “Eye on People” to Discovery Communications. The network, which reaches 11 million subscribers, is re-named Discovery People.

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Your Choice TV, which relocated to Denver in 1997, shuts down operations in August after losing approximately $25 million. Owned by Discovery Communications and Liberty Media, it provided time-shifted programming to 55,000 subscribers in TCI systems offering HITS digital programming tier – HBO, ABC, Court TV, C-SPAN, Comedy Central, ESPN, PBS and various Discovery-owned networks.

Convergence continues as broadcast networks and programmers invest in new media ventures and develop websites that integrate their video programming content. Microsoft Corp. passes 500,000 customers for WebTV, while Intermedia's Kingsport, Tennessee system, Wink Communications, launches an Enhanced Broadcasting technology that allows users to go to a website without turning off the TV. WorldGate Communications Inc. rolls out its Internet TV service on a Charter Communications system in St. Louis.

Though it was a lackluster year for most industry IPOs, Rupert Murdoch takes Fox Entertainment Group public as the third largest IPO in history. Its stock rose over 10 percent on issue day, bringing parent company News Corp. $2.8 billion in proceeds.

The Department of Justice (DOJ) claims PrimeStar's cable owners dismantled the first EchoStar/ASkyB deal and files an antitrust suit in May to prevent PrimeStar from gaining access to the 28 transponders in the third and final available full-CONUS direct-broadcast satellite slot (110 degrees west). This action dissolves the June 1997, $1.1 billion merger agreement with MCI Communications and News Corp., because PrimeStar will not agree to the DOJ demand that the five cable owners divest their ownership interests for the transaction to continue. MCI purchased the transponders for $682.5 million in 1995.

In August, with a 5-0 vote, the FCC tightens existing program-access rules in an effort to help direct-broadcast satellite, wireless cable and private cable providers compete against franchise cable companies. Fines for violations are up to $75,000 for a single violation and victims can collect damages where programmers willfully violate the rules.

The FCC Cable Services Bureau reversed its previous order and extends U S West Media Group's waiver from federal cross-ownership, allowing the company to keep the Minneapolis Cable system. The ruling was based on U S West restructuring its U S West Communications and UMG subsidiaries into separate public companies that abrogate the ban on telco-cable cross ownership.

In a groundbreaking decision, the Mt. Hood Cable Regulatory Commission recommends the city of Portland and Multnomah County, Oregon make ISP access a condition for transferring their

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TCI franchises to AT&T. TCI refuses to accept the provision. Internet Service Providers, including America Online Inc., and telcos also lobby the FCC and local regulators to block the merger unless AT&T agrees to unbundle TCI's @Home network.

In a pro-DBS decision, the FCC announced DBS providers will be allowed to set aside the minimum four percent of their channel capacity for nonprofit educational programming, instead of the maximum seven percent allowed by the 1992 Cable Act.

The FCC rules that broadcast stations that use their digital-TV licenses for subscription services will have to pay fees equaling five percent of gross revenues. It is unclear whether revenues from programming tiers made of digital-TV signals and digital-cable networks would be considered retransmission payments or be subject to new fees.

On September 17, the FCC rules that Multipoint Multimedia Distribution Service (MMDS) wireless cable operators can transmit two-way, high-speed data services, generating more competition for wireline cable modems and Digital Subscriber Link (DSL) technologies.

Citing "social contract" regulations, the FCC orders eight separate Time Warner Cable systems in New York and Massachusetts and eight New York Cablevision Systems Corp. franchises to refund overcharges varying from $.36 to $1.37 each. Cablevision is also forced to refund $1.2 million to 300,000 subscribers in 60 communities in nine states. TCI agrees to refund $4.8 million, including $41.88 each to 61,000 subscribers in Oakland, California. After March 31, 1999, the FCC regulation of expanded basic rates will “sunset”, as stated in the 1992 Cable Act.

The FCC proposes easing regulations for telcos to build long-distance fiber networks as long as the new capacity is made available to competitors at cost. This is designed to allow telcos to better deploy their DSL technology to individual homes and thus, compete with cable modems.

The FCC's June ruling allows set-top boxes to be available commercially at retail outlets. The move is mandated by the Telecommunications Act of 1996. The commission also rules MSOs must separate out security functions from boxes by July 1, 2000, in spite of industry lobbying to delay the date until September 1, 2000. (*1998 FCC LEXIS 2778; FCC No. 98-116*)

The American Advanced Television Systems Committee (ATSC) HDTV system has its public launch during the live coverage of astronaut John Glenn's return mission to space onboard the space shuttle Discovery.

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Time Warner plans to launch high-definition programming for digital customers in Tampa, Florida. Customers will watch HBO's HDTV programming in upgraded areas with 256 quadrature-amplitude-modulation (QAM) transport delivered through Scientific Atlanta's Explorer 2000 set-top boxes. The pilot project is in preparation for eventual FireWire standardization compliance by CableLabs and builds on TWC's pass-through of HBO and CBS signals in New York City.

The International Telecommunications Union gives final approval to the G.Lite standard backed by major telephone companies and computer industry players. This technology is an easily deployed, high-speed data product using existing phone lines and targeted for mass retail sales. G.Lite specifications are at 1.5 megabits per second for downstream service and 612 kilobits per second for upstream transmission, compared with 8 mbps upstream and 1 mbps for "full" DSL.

The DOCSIS project at CableLabs enters its final phase of developing a third generation of cable modems that may lower costs to less than $100 per modem by sharing some functionality of the user's PC or other network appliance. The second generation technology, DOCSIS 1.1 specification, supports IP telephony. The third generation units, CPE-controlled cable modems (CCCM), are expected to be introduced by 2000 year-end.

CableLabs selects the IEEE 1394 FireWire standard as the set-top box interface for future home networks. The standard was originally ratified in December 1995 and more than 200 manufacturers have IEEE 1394 products. A bi-directional interface, FireWire was designed for use by average consumers to carry multiple independent streams of digital video and audio. For home network use, FireWire is easy to use and nearly 50 times faster than the data rate of USB (Universal Serial Bus).

PacketCable goes live when Lucent and Motorola launch cable telephony over IP in Union, New Jersey as the first to comply with PacketCable 1.0 Specifications. Charter Communications also launches IP telephony in its Fitchburg, Wisconsin system with Cisco DOCSIS compliant equipment. AT&T tests broadband IP telephony in eight markets. Industry projections are to have 400,000 to 500,000 IP subscribers by 2000 year-end.

Diva is issued a patent for the "system-stripping" architecture it uses for its VOD server. Diva has exclusive rights to 15 issued patents and two allowed applications for Video on Demand in

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the U.S.

DIRECTV launches its 1R satellite for a 101 degree high-power DBS orbital slot to facilitate offering local broadcast stations up to 20 local markets. After technical and weather delays, EchoStar successfully launches a fifth satellite, EchoStar V which will operate from 110 degrees west longitude. EchoStar acquires this satellite from American Sky Broadcasting Inc., the ill-fated joint venture of MCI WorldCom Inc. and News Corp.

The industry's financial growth is fueled by mergers and anticipation of new services. The 10 publicly traded MSOs see their stocks rise an average of 30 percent during the year. Though less than half of the 80 percent increase in 1998, and nowhere near the dizzying heights of Internet stocks, it marks the third straight year of increases in stock value. Daniels & Associates reports a record $2.3 billion in transactions in the first half of the year, surpassing last year's record first half of $2.2 billion.

AT&T enters the cable business on March 9 by closing on the $43 billion stock and cash deal to acquire TCI. The company, AT&T Broadband & Internet Services, initially brands its services as AT&T Cable Services, AT&T Digital Cable and AT@T @Home. The company also tries to close on its acquisition of MediaOne Group, but still hasn't met regulatory approvals by year-end. The value-per-subscriber of the AT&T-MediaOne deal is reportedly the highest of all major transactions, at $4,632 per subscriber.

The DBS Players are reduced to two. DIRECTV's parent company, Hughes Electronics, acquires medium-power PrimeStar Inc.'s 2.3 million subscribers and assets for $1.82 billion. This includes 11 high-power satellite frequencies from Tempo Satellite Inc. DIRECTV, (7.1 million customers), and is the third largest provider of video services, trailing only AT&T and Time Warner. DIRECTV also buys out USSB in May. The remaining major DBS, EchoStar, picks up the DBS assets of News Corp and MCI WorldCom, giving up only 2.5 percent of voting rights and 14.6 percent of diluted equity in a $1.25 billion deal. The company surpasses three million subscribers only nine months after reaching the two million mark. Together, DBS providers add more than three million subscribers by year-end for a total of over 11 million homes.

The Satellite Home Viewer Improvement Act is signed by President Clinton on November 29 and creates opportunities for DBS providers to beam local broadcast signals back to their home markets. DIRECTV and EchoStar begin launching service to major cities. By year-end, four local broadcast network channels and a national PBS feed are available to 17 DIRECTV markets and 18 EchoStar markets, exceeding their initial promises. The Act further clouds must-carry and

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retransmission consent negotiations with broadcasters.

The FCC's sixth Annual Report on Competition in Video Markets notes cable's share of the multichannel market drops three percent to 82 percent and it will continue to erode DBS' new local-in-local capabilities. Overall, the multichannel pie increases from June 1998 to June 1999 as DBS's market share grows to 12.5 percent. Cable actually increases two percent to 66.7 million customers because the multichannel subscriber households increase five percent to 80.9 million. The NCTA releases a report mid-year, revealing seven out of 10 new customers choose DBS or another multichannel video competitor over cable.

America Online, Inc. commits $1.5 billion to DIRECTV and DirecPC with plans to jointly promote the interactive-TV service AOL TV; AOL Plus, a high-speed internet service for Personal Computers; and the HNS “DirecDuo” product, which combines feeds for DirecPC and DIRECTV services through a single dish. The current telephone-return path will be replaced with a two-way connection via Ku-band satellites.

By year-end, there are more than 1.6 million subscribers to cable-based, high-speed data services in the U.S. and Canada. High-speed wireless technology begins to surface, competing with cable's wired broadband technology.

The telephone companies' high-speed data technology, DSL, takes off and reaches 500,000 customers in six months. DSL technology is limited because customers must be within three miles of a central office.

Charter Communications raises $3.7 billion in the fourth largest initial public offering of all time. The company spends $12 billion on acquisitions; including InterMedia Partners, Rifkin and Associates, Time Warner Fanch Communications, Falcon Communications, Bresnan Communications and Avalon Cable. This makes Charter the fourth largest US cable operator with 6.2 million customers. Charter chairman, Paul Allen, also jolts the industry when his Vulcan Ventures purchase a $1.65 billion stake in RCN Corp., the over builder actively constructing advanced fiber-optic networks in the Northeast and California.

Other MSOs acquire cable systems including Adelphia, which spends $11.6 billion on six acquisitions that add 3.2 million customers for a total of 5.3 million customers, in addition to Century Communications and Harron Communications. Comcast Communications doubles its subscriber base from 4.6 million to 8.2 million. Though Comcast loses the fierce bidding war for MediaOne to AT&T, it gets a $1.5 billion breakup fee, plus the ability to acquire up to 1.2 million customers from AT&T, among other considerations. Comcast also completes its $700 million

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purchase and then doubles its equity interest in Jones Intercable. Through strategic acquisitions, Comcast creates the largest continuous cluster on the Eastern seaboard, from metro Washington D.C. to New Jersey. Cox Communications acquires 485,000 subscribers from AT&T for $2.7 billion, plus systems from TCA Cable, Media General and Gannett's Multimedia Cablevision; solidifying its position as the fifth largest MSO. The average value in these deals is estimated at $3,903 per subscriber, up from $2,877 per subscriber in 1998 and from the 10-year low of $1,753 per subscriber in 1992.

Digital-cable deployment takes off, with an estimated 5.1 million digital cable subscribers by the end of the year.

The faces of cable change from the explosion of new interactive services and the effects of consolidation. Among other signs the industry is changing, Leo Hindery, former TCI president and CEO, abruptly departs from AT&T- B&IS in October, five months after the merger is complete. He later joins Internet company, GlobalCenter, Inc., and its parent company U S West suitor, Global Crossing, Ltd.

AT&T Corp. refocuses its wireless strategy when its initial plan to work with other cable operators to sell telephony over cable falters. The new strategy positions its fixed wireless operations to complement its cable strategy and offers market share in rural areas without other cable operators.

High-profile mergers continue in all sectors of the business. @Home merges with Internet portal Excite, Inc. for $7.2 billion. The RBOCs also consolidate as Qwest wins U S West for an announced $48.5 billion merger over offers from Global Crossing. Long distance companies Sprint and MCI WorldCom announce merger plans in October.

By year-end, high-speed Internet service Excite@Home has 1.4 million subscribers. MediaOne Express, MediaOne’s high-speed service, changes its name to MediaOne Road Runner and hopes to reach 500,000 customers by year-end.

Another major player competing with Excite@Home, RoadRunner, WebTV Networks, America Online Inc. and other Internet TV players is the joint venture, Broadband Partners. Created by Vulcan Ventures, Charter Communications, Go@Net Inc. and High Speed Access, the service is designed to develop high-speed “broadband portal services” for television viewers through digital set-top boxes.

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Interactive cable-TV services continue to gain momentum--WorldGate and Wink Communications head the list with initial public offerings. General Instrument unveils SURFview, a TV set-top that provides Internet access capabilities at $99, using WorldGate's Internet over TV application. It is available to current WorldGate affiliates and targeted to customers who can't afford PCs and/or want multiple Internet conduits at home.

Broadcast Digital Television sputters, with 109 stations providing broadcast HDTV signals to just 24,631 TV sets; nine months after the first station begins sending digital signals. DBS providers EchoStar and DIRECTV carry HDTV feeds of HBO and plan to add Showtime. Industry projections forecast fewer than five percent of households will watch DTV by 2005. The FCC's original plan was to convert the US to digital television by 2006.

The first two quarters of 1999 generate $4 billion in advertising revenue for cable networks, a 29 percent jump compared to the first six months of 1998. Total ad revenue for the Big Four broadcast networks is $16.27 billion in 1998 and is expected to be the same for 1999.

The trade association, CATA, closes its doors June 30 due to a joint decision of CATA's board and the National Cable Television Association's board. The top 30 MSOs belong to both organizations. The Small Cable Business Association changes its name to American Cable Association to stop being confused with the leading satellite-industry association, SBCA. The ACA has 300 members serving about 3.2 million cable subscribers.

Legislation introduced to push back the March 31 deadline for the FCC to cease regulating cable prices on expanded basic cable services, fails to pass. Cities retain the right to regulate lifeline basic services.

The Iowa State Supreme Court withdraws its 1998 opinion, saying it is appropriate for municipalities to operate telephone utilities. (*City of Hawarden v. U S West Communications,* Inc.)

Open access preoccupies the industry much of the year. The U.S. District Court rules in June that the local regulators in Portland can force AT&T Corp. to open its network as part of the franchise transfer process. The ruling immediately goes to the Ninth Circuit Court of Appeals. The core issue is whether high-speed Internet access is a cable or telecommunications service and whether a cable operator is a "telecommunications facility" or a provider of "telecommunications services". The NCTA argues services like Road Runner and Excite@Home are advanced cable services and should be regulated like cable service. In response, AT&T files a lawsuit against Portland challenging its authority to demand the company open its platform to

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competitors. Congress introduces several Open Access measures, including H.R. 1686, the Internet Freedom Act, which would allow unaffiliated ISPs denied cable access to file antitrust lawsuits against cable operators. After defending its right to refuse to carry independent Internet Service Providers for much of the year, AT&T smothers rising public outcry and breaks ranks with other cable operators in a December 6 agreement to provide MindSpring, the nation's second largest ISP, across its high-speed broadband network. (*AT&T v. City of Portland*)

President Clinton signs the Satellite Home Viewer Improvement Act on November 29, which grants DBS providers the opportunity to bring local broadcast signals into local markets.

On July 31, the U.S. District Court in Miami orders DIRECTV and Primetime 24 to discontinue distant network stations service to customers in Grade A and Grade B contours. Following the enactment of SHVIA, the court rules in December that Primetime 24 can sell distant network signals to any C-band dish owner who subscribed before Oct 30, regardless of whether they disconnected or were terminated by court order. (*CBS v. Primetime 24, CBS v. DIRECTV*)

Late fee charges plaguing the industry for years took on a new level – the Maryland Appeals Court issues a July ruling upholding a lower court's ruling in a class action lawsuit that AT&T must return about $7.5 million in illegal late fees and interest payments to cable customers in Baltimore. Dozens of late fee lawsuits are pending around the country. (*United Cable v. Burch*)

The U.S. Court of Appeals for the Fifth Circuit in New Orleans holds that local governments have the authority to require open-video system operators to obtain franchises, even though Congress intended to lift that burden with the Telecommunications Act of 1966. (*City of Dallas v. FCC*)

On February 17, The Iowa State Supreme Court withdraws its 1998 opinion and says it is appropriate for municipalities to operate telephone utilities.

(*Iowa Telephone Ass'n v. City of Hawarden*)

Mergers on the programming side include the announcement of the largest media merger between Viacom Inc. and CBS Corp. for $41 billion. It will create a $91 billion global media powerhouse.

For the first time, a majority of U.S. households spend more time each week watching basic cable than viewing the Big Four broadcast networks combined. Nielsen's second quarter data reports cable households watch an average of 27 hours and 49 minutes of ad supported cable

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networks versus 26 hours and 5 minutes of broadcast network programming.

The concept of TV-Internet convergence gains strength as a number of companies link TV shows with specially synchronized content on the Internet, whereby viewers can use computers and TVs simultaneously. Research verifies the increase of viewer “multi-tasking.” The number of Web-over-TV options increases.

Turner South, the first regional entertainment network, launches to serve one million customers in six states and MediaOne Group Inc. subscribers in Atlanta.

Time Warner Cable's Mid-South division launches Weatherscan Local by The Weather Channel in October. It is the first Internet-delivered programming service by a major network.

[?]Cable captures one-third of the 387 Emmy nominations. HBO programs receive 74 nominations, A&E Network gets 20, Showtime has 11 and Turner Network Television receives 10 nominations. Bravo, The Disney Channel and Nickelodeon each get two nominations. Of HBO's nominations, 16 are for its critically acclaimed dramatic series, “The Sopranos,” including best series, best actor, best actress, and best supporting actress. A&E Network receives five Emmy Awards.

Competition in the health programming genre intensifies as Fox's The Health Network launches July 19 with a live simulcast cesarean-section birth of triplets in Phoenix to 17 million households and its website. This service merges Fox's FitTV and America's Health Network which previously showed a live birth on its Internet site. Discovery launches a full-time analog health channel, Discovery Health Channel on August 2. Its Internet site averages 400,000 page views a week in its debut.

The focus on programming for women also heats up. The incumbent Lifetime reconfigures staff and programming in anticipation of the launch of former Nickelodeon/Disney/ABC Cable Networks Executive, Geraldine Laybourne's new Oxygen Media service, scheduled to launch February 2000. Oxygen's principals also include Oprah Winfrey and the successful TV programming team of Marcy Carsey, Tom Werner and Caryn Mandabach. Vulcan Ventures invests $100 million for a 12 percent stake in luxury goods groups, LVHM Moet Hennessy, Louis Vuitton, Inc.; Europe@web makes a $122 million investment. Turner Broadcasting, Time Inc. and Advance Publications announce plans for The Women's Channel, but pull the plug before the service launches. Former USA Networks' founder, Kay Koplovitz, is named CEO of the Woman's Working Network in addition to launching the PPV, Broadway Television Network.

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The Military Channel goes dark July 14, after failing to gain financial backing from MSOs and gaining distribution to only eight million homes in 10 months.

News Corp. and Fox acquire Liberty Media's 50 percent stake in Fox/Liberty Networks, giving Rupert Murdoch full control of Fox Sports Net, FX and other Fox/Liberty businesses for about 79.9 million shares of News Corp stock worth about $2.8 billion. Fox buys back 56.2 million shares from MCI WorldCom for $1.39 billion.

AOL invests $30 million in Blockbuster for a three percent stake and to jointly develop broadband content and distribution channels. AOL also signs an exclusive deal with TV Guide to provide program listings and episode information for AOL's 20 million subscribers.

Gemstar International Group Ltd. settles its patent infringement case against TV Guide with a plan to purchase TV Guide, Inc. for $9.2 billion.

The FCC's Fifth Annual Competition Report shows DBS grew 44 percent in one year (from 5 million to 7.2 million subscribers, or 9.4 percent of the market) while the cable industry grew two percent (three million customers reaching a total of 73.6 million households) from 1997 to 1998. Cable's market share, however, dropped to 85 percent of the multichannel video programming distributor (MVPD) market, down from 87 percent in 1997. The study also shows cable prices outpaced inflation. Cable prices rose 8.5 percent while the Consumer Price Index rose two percent, according to the Bureau of Labor statistics.

As expected, regulation of the upper-tier prices for major cable companies ceases on March 31.

Retransmission consent negotiations again result in embittered battles. Among others, Fox Broadcasting demands Cox Communications distribute FX, Fox Family and Fox World Sports company-wide on its digital tiers. As a result, Fox's broadcast signal disappears from Cox's line-up for a week; angering 400,000 customers in Washington D. C., Cleveland, Dallas, Houston and Austin.

The $56.4 million MediaOne merger with AT&T stays in limbo until the FCC's cable-ownership-cap-and-attribution rules, along with the issue of "insulated limited partnerships" is resolved. Pushing AT&T over the 30 percent cap is credited to MediaOne's 25.5 percent limited partnership in Time Warner Entertainment (TWE); making TWE's 9.7 million subscribers attributable to AT&T. Together, AT&T, MediaOne and Time Warner will serve 42 percent of the

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nation's cable and satellite homes. (*14 FCC Rcd 19014; FCC No. 99-904*)

A crucial FCC decision December 22 opens the door for Bell Atlantic Corp. to offer long-distance service to New York residents – the first time since the AT&T breakup that an RBOC will be allowed to offer local and long-distance service. (*15 FCC Rcd 3953; FCC No. 99-904*)

On August 25, The Connecticut Department of Public Utility Control votes to allow SNET, which was purchased by SBC Communications last year, to discontinue construction of its statewide HFC network. Though SBC was the first RBOC to jump into the video business in 1993, its operations never lived up to SBC's expectations. SBC absorbs Ameritech and halts the franchising efforts of Ameritech New Media, the nation's largest cable over-builder. Its cable/data networks pass 1.7 million homes and serve 200,000 subscribers in 114 communities in Illinois, Ohio and Michigan. (*1999 Conn. PUC LEXIS 347; Docket No. 99-04-02*)

The FCC reports that 375,000 residential consumers are purchasing broadband services and that the broadband marketplace should remain unregulated. (*First Section 706 Report* ¶¶ 74, 80, 88).

CableLabs certifies the first DOCSIS cable modems, made by Thomson Consumer Electronics and Toshiba. A cable modem termination system from Cisco is qualified.

First TiVo DVR is shipped.

Specifications are issued by CableLabs for DOCSIS 1.1 cable modems.

The FCC approves the sale of Comcast Corporation's cellular-telephone unit to SBC Communications, Inc. for $400 million in cash and $1.3 billion in assumed debt. Comcast Cellular serves approximately 800,000 customers, including the company's home market of Philadelphia's Bell Atlantic. (*14 FCC Rcd 10604; FCC No. DA 99-1318*)

The FCC requests a federal appeals court in California overturn a federal district court order supporting open access to Internet service providers on cable systems in Portland. They maintain the policy for the Internet regulation is national, not local. As the "open access" issue gets hotter, the openNET Coalition of Internet-related companies hire powerful lawyers and a politically well-connected public relations team to assist communities where the issue is raised. (*AT&T v. City of Portland*).

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2000s

2000

AT&T tests "LightWire", which pushes fiber to small nodes and places intelligence in strategically located Cable Modem Termination Systems (CMTS). Another approach to deal with bandwidth constraints is to boost compression ratios. New compression methods include Selective Wave Division Multiplexing (SWDM) which mixes 1310 nanometer optics with more powerful 1550 wavelengths, when and where needed.

Motorola completes its $14 billion acquisition of General Instrument.

The NCTA and Consumer Electronics Association reach a basic agreement February 23 on digital cable TV compatibility. Still under discussion are FireWire and copyright protection agreements. Some consumer electronics companies are reluctant to install the 1394 plug necessary for a cable system to connect into a digital TV, citing increased complexity and costs. The groups meet in anticipation of FCC Chairman Kennard's imposed April deadline for government-mandated standards.

The FCC reveals that since the Telecommunications Act of 1996, the industry has spent $36 billion upgrading its infrastructure of hybrid fiber and coaxial cable to provide increased broadband services.

The stock market is startled and investors take a fresh look at the relationship between highly valued Internet stocks and traditionally valued asset-based companies with the January 10th announcement of the $350 billion stock merger between AOL and Time Warner; the largest takeover in history. AOL shareholders get 55 percent of AOL Time Warner and TWX shareholders get 45 percent, but an equal number of board seats. The merger combines the power and reach of the AOL brand with the larger, Time Warner broadband pipe, serving approximately 13 million customers, and a wealth of content from Time Warner's programming networks and print publications.

EchoStar Communications Corp. invests $50 million in Gilat-to-Home (GTH) – a joint venture between Microsoft Corp. and Tel Aviv, Israel-based Gilat Satellite Networks Ltd – to launch a

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two-way, Ku-band satellite-based Internet service. GTH will send both the Internet and EchoStar's Dish Network video signals to customers using only a single satellite dish. EchoStar has a similar investment in iSKY, Inc. which plans to deliver two-way broadband service via Ka-band satellites late next year. Both DirecPC and Gilat have Very Small Aperture (VSAT) models on the market that operate at downlink speeds well above 1 megabit per second. Gilat currently offers SkyBlaster, an interactive IP satellite system for business customers.

Cable ISP, RoadRunner, passes 730,000 subscribers in the first quarter and plans to reach one million subscribers during the summer. Turn-key ISP provider, High Speed Access (HSA), reaches agreement with Charter Communications to deploy the Charter Pipeline Broadband Internet service. HSA is the third largest cable ISP behind Excite@Home and RoadRunner. Excite@Home reports subscriber increase of 220 percent from the previous year to 1.5 million, including 350,000 subscribers in the first quarter.

Cox Cablevision's LemonLINK project, a fiber optic-based computer network connecting schools, homes and local government in Lemon Grove, California, is selected by the Smithsonian Institution as a new way to use technology in education.

Adelphia Business Solutions, Inc. based in Coudersport, Pennsylvania, trumps AT&T and Bell Atlantic for a contract worth an estimated $228 million in revenues to connect Pennsylvania government buildings and state-affiliated universities. The company will install 80,000 telephone lines and 2,500 data nodes to provide the state-wide service. Cablevision Systems Corp.'s Lightpath subsidiary outbids Bell Atlantic and other rivals for a contract to rewire much of Westchester County, New York. This high-bandwidth network will link more than 475 buildings in 43 municipalities with integrated voice, video and data services for an estimated $23.4 million over the next five years.

In a case brought by the U.S. Justice Department and 19 states, U.S. District Judge Thomas Penfield Jackson rules Microsoft Corp. violated antitrust laws by promoting its browser and software over rivals.(*United States v. Microsoft*)

The website, iCraveTV.com, redirects feeds from U.S. TV stations to Canadian Internet users for 62 days before it is forced to cease operations. A group of plaintiffs, including the Motion Picture Association of America; broadcasters ABC, CBS and Fox; as well as a dozen movie studios and three sports leagues, file suit. A federal judge in Pittsburgh, Pennsylvania grants a preliminary injunction barring iCraveTV from transmitting U.S. copyrighted films and TV shows. (*Twentieth Century Fox v. iCraveTV*)

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Although Steve Case from AOL and Gerald Levin from Time Warner pledge to open Time Warner's networks to competing ISPs before two Senate committees, open access legislation continues.

Several hundred thousand DIRECTV customers lose their CBS and Fox network signals February 28 when a federal court in Miami orders DIRECTV to turn off its distant CBS and Fox signals. DIRECTV had earlier replaced Primetime 24 network signals with its own feeds uplinked from New York and Los Angeles outlets. Outraged broadcasters received a temporary restraining order which resulted in the signals being cut. Another DBS provider, PrimeStar, was not an affiliate of Primetime 24 when EchoStar replaced its Primetime 24 signals with New York and Los Angeles stations for its distant-network feeds several months earlier. While suits filed against EchoStar by the broadcasters still are pending, EchoStar continues to provide the signals.

The pay-per-view service, Viewer's Choice, changes its name to IN DEMAND for the new millennium and kicks of an ambitious marketing and branding campaign to jump-start the untapped PPV market. Overall, PPV revenues drop 70 percent compared to the first quarter 1999, due to a decline in the number of wrestling and boxing events.

Blockbuster teams with TiVo to deliver movies through PVR (Personal Video Recorder) machines.

As scheduled, Oxygen launches February 2 to an estimated eight million homes.

Discovery Communications announces plans to shut down “Discovery People” and focus its investment on networks that provide the most opportunity, including Animal Planet, Discovery Health, and The Travel Channel. Discovery previously shut down Knowledge TV, formerly known as Mind Extension University, which it had acquired from Jones Intercable.

Broadcasters extend must-carry rights to DBS. Congress provides a loan guarantee program to provide $1 billion in loans to assure there will be special satellite capacity – all local broadcast stations will be available to the three percent of U.S. households that may not have access to local broadcast signals via cable or over-the-air microwave.

The FCC drops the funds collected from cable operators to $.47 per customer this year, expecting a total contribution of about $31 million. (*2000 FCC LEXIS 1704; FCC No. 00-117*)

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Retransmission consent agreements break down again when Time Warner, Inc. and Walt Disney Co.'s ABC Broadcast network fail to reach agreement. Disney insists Time Warner systems move The Disney Channel from a pay service to a basic service and also carry its new SOAPnet channel, in order to keep the ABC-owned broadcast channel on the company's systems line-up in Houston, Los Angeles, New York and suburban Milwaukee.

The major broadcasters and the National Association of Broadcasters appeal to the FCC to force cable operators to carry digital-TV signals. Under current FCC rules, all commercial TV stations have to be transmitting in digital by May 2002, but the rules do not guarantee them cable access. Cable argues that digital must-carry would force operators to drop popular cable networks in favor of duplicative and little-viewed TV stations. Of the 119 stations broadcasting in digital format, only two have their digital signals carried by the local cable system. (*15 FCC Rcd 5257; FCC No. 00-39 Notice of Proposed Rule Making*)

2001

The FCC announces that cable operators may pass on to consumers and itemize on monthly bills, the entire amount of a franchise fee assessed by the local franchising authority including franchise fees from non-subscriber related revenue. (*FCC News Release 10/4/01*)

On January 18, 2001, the FCC declines to adopt a dual-carriage requirement which they rule would burden cable operators' First Amendment interests. This means that an operator does not have to carry a digital signal until they have surrendered their analog licenses.

The FCC adopts rules relating to the cable carriage of digital broadcast television, stating that a digital-only TV station, commercial or non-commercial, can assert its right to carriage on a local cable system. The FCC also states that a TV station that returns its analog spectrum and converts to digital operations must be carried by local cable systems. (*FCC News Release 1/22/01*)

The Virginia Federal Appeals Court upholds a lower court ruling regarding the "must carry" rule. They rule it is constitutional to require satellite TV providers carry every local TV station in the markets they choose to serve.

The FCC rules that Time Warner Cable is not required to transmit an Electronic Program Guide (EPG) that was embedded in analog TV signals by Gemstar–TV Guide International Inc. The FCC holds that Gemstar's EPG went beyond the requirement that cable operators carry program-related material in the Vertical Blanking Interval (VBI).

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Rogers Cable, Inc. launches the largest HDTV offering by a cable operator in Canada. The launch allows customers to choose up to eight channels of HDTV programming; the widest selection of any cable or satellite company to date.

The worldwide sales of digital set-top boxes (for cable, satellite and terrestrial platforms) reaches 36 million. This is up from the 28 million sold in 2000.

America Online, Inc. and Time Warner, Inc. announces the completion of their merger which creates AOL Time Warner, Inc. (AOLTW) The merger leads the convergence of media, entertainment, communications and Internet industries.

In December, the Board of Directors for AT&T Broadband and Comcast Corporation reaches a merger agreement in a $72 billion transaction. The new company is AT&T Comcast Corporation – the largest communications, media and entertainment company with over 22 million subscribers.

Comcast selects Scientific-Atlanta to assist in its launch of VOD (Video On Demand). Comcast wants 2 million households to have access to VOD by year-end.

The number of households having basic cable is 69.9 percent or 72,958,180. The homes passed by cable is 98.6 million or 69.2 percent. The annual cable revenue is $48.15 billion.

Lifetime is the top primetime ratings winner. There is a three-way tie for runner-up with Cartoon, USA and TBS. Nickelodeon and TNT split for fifth place.

AOL Time Warner Inc. is granted cable TV-carriage rights in China, with an agreement to have its CETV Channel distributed to cable television subscribers in the southern region of China. Encore International renews its pact with China for 5 additional years; breaking into the Shanghai market. The pact ensures the carriage of a nightly primetime block.

In March, the U.S. Supreme Court blocks an effort by Time Warner Entertainment, the nation's second largest cable television operator, to expand its business. Time Warner argues that the restrictions imposed by the 1992 Cable Television Consumer Protection and Competition Act, as well as limiting the number of channels a cable system can offer if it owns a financial interest, violates its First Amendment rights. The Supreme Court refuses to hear the appeal and backs Congress' effort to limit the growth of cable operators.

In June, the U. S. Court of Appeals for the District of Columbia strikes down as unconstitutional, several FCC regulations that impose limitations on horizontal ownership by cable operators and vertical relationships with their program suppliers. In what is called, "The Time Warner II Decision", the DC Court of Appeals states the FCC failed to show that vertical and horizontal limitations were a reasonable necessity and in violation of the First Amendment.

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CableLabs certifies seven additional DOCSIS 1.1 high-speed cable modems bringing the total to nine modems certified. The new modems are compatible with existing DOCSIS 1.0 equipment and work with future systems.

SCTE and ETSI (European Telecommunication Standards Institute) announce that new specifications defining an advanced Internet Protocol (IP) architecture has been achieved. The specifications define an end-to-end system for delivery of communications services, including telephony to cable customers' homes.

BigBand Networks has integrated the VOD Bandwidth Sharing and In-Band IP Gateway Modules of its Broadband Multimedia Service Router with Concurrent's MediaHawk Broadband VOD system. This will enable the cable operator to more efficiently use available bandwidth for VOD and ITV offerings.

Pace Micro Technology commercially deploys more than one million DOCSIS/Euro DOCSIS, enabling digital home gateways in the United Kingdom. The gateways allow cable operators to provide interactive TV services such as email, Internet access, home shopping and banking; along with providing high-speed data to an external PC and support for voice-over IP.

Motorola Broadband Communications Sector ships its 15 millionth digital set-top and its five millionth cable modem. The company also launches three new interactive set-tops: the DCT5100, DCT5200, and the DCT52X0. The set-tops have new enhancements, such as HDTV decoding as a standard feature and PVR capabilities.

Mixed Signals Technologies announces that its ITV sentry and ITV firewall products will enable cable operators to monitor, filter and replace interactive TV data in their video signals.

Scientific-Atlanta introduces, InView, an interactive TV information application that provides 24-hour, on-demand channels for interactive access – from local weather to stock information.

DIVA teams with Universal Music Group to develop and deliver "The Viewing Lounge" to digital cable subscribers. The music application will allow viewers to rate custom blocks of music-video programming based on their favorite types of music. "The Viewing Lounge" is already deployed on some cable broadband PC platforms.

Michael K. Powell was designated FCC Chairman by President Bush. Powell served as a Commissioner beginning in November 1997.

HDNet launches.

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2002

Four PacketCable devices are certified in the latest CableLabs test wave. This is an industry first for cable operators. The PacketCable device focuses on helping cable operators deliver voice communications using Internet Protocol (IP).

DOCSIS 2.0 has been approved by the International Telecommunications Union-Telecommunication Section (ITU-T) as the international standard. This technology allows cable operators the ability to offer speeds up to 600-times faster than standard dial-up telephone modems.

In December, fourteen consumer electronics companies and seven major cable operators sign the "Memorandum of Understanding", an agreement that allows consumers to buy digital television that connects to digital cable without a set-top box or the CableCARD.

In February, Rogers Cable Inc. became the first Canadian MSO to launch VOD, for selected Toronto customers. It is expected that by 2003, VOD will be available to 90 percent of Rogers's customers. Alliance Atlantis provided content.

By the end of 2002, nearly 37 million homes are passed with high definition television (HDTV), or one in three homes.

Cable modem customers reach 11 million and U.S. cable companies serve more than 2.5 million residential local cable telephone services. High-speed cable modems account for 64 percent of all high-speed Internet customers nationwide.

The cable industry invests more than $70 billion in private capital to provide advanced digital services to consumers. This equates to more than $1,000 per subscriber for upgraded cable systems. Services are now available to over 85 million homes (83 percent).

According to the Cabletelevision Advertising Bureau, television households tune into more ad-supported cable television than for all broadcast networks, averaging 26.5 hours per week versus 24.4 hours. Basic cable networks receive 53 percent of all television viewing in the 2001 to 2002 season.

The acquisition of AT&T Broadband by Comcast Corporation is approved by the FCC and the Department of Justice in November. Comcast now has over 22 million subscribers; double the size of its nearest competitor, Time Warner Cable.

In March, Adelphia Communications Corp. discloses a $2.3 billion liability in off-balance sheet debt. Adelphia files for Chapter 11 bankruptcy in June. John Rigas, his sons Timothy and Michael, and other Adelphia executives are indicted on conspiracy and fraud.
John Rigas later is sentenced to 15 years in prison, Timothy 20 years.

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In a 6-2 decision, the Supreme Court rules that the pole attachment law is intended to give the FCC authority to control pole rates and that it applies to all services offered. This was done after the utility pole owners went to court to raise fees for new services (Internet), arguing that the pole attachment law only applies to cable services.

ESPN becomes the first television network to carry all four major professional sports leagues during one year.

Cablevision Systems Corp. sells its Bravo network to broadcast network, NBC. This provides NBC, which also owns CNBC and MSNBC, its first cable outlet for entertainment programming.

In the case of *NCTA v. Gulf Power*, the U.S. Supreme Court upholds the FCC's discretion to set pole attachment rates for commingled cable and data services at the cable attachment rate. This interpretation of the pole-attachment law avoids disputes with utilities when a cable operator introduces broadband service on its plant, which helps advance broadband rollout.

Comcast and AT&T Broadband complete their $47.5 billion merger; combining systems to serve 21 million video customers in 38 states, with 6.3 million digital video customers, 3.3 million high-speed data customers and 1.3 million cable phone subscribers.

CableLabs approves first DOCSIS 2.0 cable modems.

2003

The FCC approves standards for digital cable-ready equipment for the home in September 2003. The current rules and agreement concern one-way "plug & play" devices: inter-industry discussions of standards for two-way "interactive digital cable-ready" television sets are underway.

The "OnlyCableCan" campaign is launched. It is a groundbreaking joint marketing initiative designed to encourage consumers to take full advantage of all services available from cable and to experience the convenience, value and innovation embodied in one connection.

OCAP was presented again at the Western Show. OpenCable and the CableCARD slot/card paved the way for set-tops and cable-ready devices to be sold at retail. OCAP goes a step further to make the services portable that run on those devices.

ESPN HD launches with the live broadcast of "Baseball Tonight".

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CableLabs issues PacketCable Multimedia, a new spec and technical report for advanced IP-based applications, which include console gaming.

CCTA announces that 2003 will be the final year of the Western Show; ending a 36-year run.

Cablevision launches HD-heavy "VOOM" DBS service.

2004

In November, the FCC issues a ruling that cable VoIP was not subject to traditional state regulation. It is an important step towards establishing a national framework for the regulation of VoIP services.

According to the measurement firm, ComScore Networks, "Cable providers are supplying the average end-user with a download speed more than twice as fast as that of DSL providers."

Between 1996 and 2004, cable capital expenditure reaches nearly $95 billion. In 2004, $9.5 billion is invested in cable infrastructure, which equates to nearly $1,300 per customer in cable upgrades and the launching of new broadband services. This includes rebuilding more than one million miles of cable plant into fiber optic technology.

For the official primetime season (2003/2004), more than half of all viewers watch ad-supported cable networks; the first time cable has topped all national broadcast networks combined during this programming period. In addition, cable-plus households tune in on a weekly basis to more than 35 hours of ad-supported cable programming, versus an average of 24 hours per week for all commercial broadcast programming combined.

The year 2004 marks the 15th anniversary of Cable in the Classroom (CIC). This program helps harness the power of cable's technology and content to help children learn through projects. It includes research about the impact of technology on teaching and learning; media literacy resources created in partnership with National PTA; online tools and content resources for teaching, learning and collaborating in publications for teachers, parents and national education leaders.

The History Channel and CNN develop a new interactive broadband learning experience focused on elections – "ELECTIONS: Your Adventure in Politics", a 3-D high speed game; and new national education awards program, "Cable's Leaders in Learning", which recognizes accomplishments of vision, innovation, action and transformation in K-12 educations.

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Cable's deployment of HDTV service increases nearly 125 percent over 2003, with the number of digital broadcast stations carried by cable operators increasing to 382. Cable networks now broadcasting in HD include Bravo, Cinemax, Comcast SportsNet, Discovery, Encore, ESPN and HBO.

Many companies begin trials or are launching Voice Over Internet Protocol (VoIP) service. These companies include Comcast Corporation, Time Warner Cable, Charter Communications, Cox Communications, and Mediacom Communications. VoIP uses data "packets" to transmit voice.

Starz Encore Group and RealNetworks announces the launch of an online service, called STARZ! "Ticket on Real Movies", which gives subscribers unlimited access to a rotating library of motion pictures. Subscribers also have access to a streamed version of the STARZ! linear service, marking the first time a premium movie channel has been delivered simultaneously over broadband.

RealNetworks' Rhapsody Jukebox subscription service gives consumers unlimited access to more than 30,000 albums of music from all five major music companies and more than 200 of the world's most prominent independent labels.

The top 10 cable companies take steps to help parents manage what their families watch. In March, these NCTA member companies and smaller cable companies announce they will make available upon request, at no additional charge, channel-blocking technology to cable customers who don't already possess the equipment necessary to block channels.

In March, NCTA announces the launch of a new consumer education campaign, "Cable Puts You in Control", designed to highlight the cable industry's commitment to educate families about responsible TV viewing. The campaign addresses the choice, control and education that cable provides to help families manage their TV viewing. A major component of the campaign is a website managed by Cable in the Classroom. The website provides information about tools and resources cable provides for families.

Adelphia goes on the auction block.

Time Warner Cable rolls out DVRs in all of its top 31 divisions. Both Comcast Corporation and Cox Communications plan to offer DVR to all of their customers by the end of 2004. Insight has DVR in 12 of its 14 markets.

In JD Powers and Associates' "Residential Long Distance Telephone Service" study, Cox ranks highest in the bundled long distance telephone service segment, scoring high in performance, reliability, billing and image.

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In May, NCTA and Kaitz Foundation coordinate the fifth annual Supplier Diversity Connection Program, which fosters relationships among minority and women-owned businesses with cable companies that utilize diverse outside contractors.

2005

In 2005, the FCC identifies 531 satellite-delivered national programming networks, an increase of 143 networks over 2004. The FCC also identifies 96 regional networks in addition to the national channels.

Microsoft Corp. and CableLabs announce they have reached an agreement that will allow Microsoft and PC manufacturers to bring to market the digital-cable-ready Windows Media Center-based PCs during the holidays.

The cable modem is available in 103 million homes; a 200 percent increase over six years ago.

Cable operators increase download speeds, with Comcast upping to 6-8 Mbps and Cablevision increasing up to 15 Mpbs.

Cable operators begin deploying interactive services such as EBay over a TV application in Austin and Fantasy Football League via TV remote in Green Bay.

Many studios begin streaming clips of programming or complete shows on downloads available through computers, iPods and cell phones.

Four cable companies sign a landmark $200 million deal with Sprint which gives operators the ability to include wireless service as a fourth component of their bundled service offerings. This allows customers to have better control over their media experience.

In 2005, cable networks and operators invest more than $32.5 billion to create and deliver quality programming to customers.

At the end of 2005, over 40 percent of cable subscribers have chosen a digital cable package – 28.5 million increase from 6 million in 2000.

Time Warner introduces its “Start Over” feature in South Carolina, which allows a viewer to watch a show already underway from the beginning.

Cable companies voluntarily include the capability to block content for family viewing as part of its “Cable Puts You In Control” initiative.

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Cable in the Classroom launches "vSKOOL", a consortium of academic, technology, software and media companies dedicated to providing education-related relief to school districts affected by Hurricane Katrina.

Comcast and Time Warner agree to jointly acquire the assets of Adelphia Communications and swap select systems, giving Comcast 1.7 million video subscribers.

ESPN360 launches [re-named ESPN3 in 2010]

Kyle E. McSlarrow becomes CEO and President of NCTA; McSlarrow had been Deputy Secretary at the Department of Energy since 2002.

Kevin Martin is named FCC Chairman by President Bush; Martin began serving as Commissioner in 2000.

CableLabs issues RFPs for high-speed data products.

Military History Channel launches.

In a 6-3 decision, the United States Supreme Court decides that cable companies will not have to share their infrastructure with competing ISPs in the case of *National Cable & Telecommunications Association v. Brand X Internet Services.*

The FCC adopts Internet Policy Statement. The statement says the Commission is "not adopting rules" but only "principles [that] are subject to reasonable network management." The four principles are as follows: "Consumers are entitled to access the lawful Internet content of their choice…Consumers are entitled to run applications and use services of their choice, subject to the needs of law enforcement…Consumers are entitled to connect their choice of legal devices that do not harm the network…Consumers are entitled to competition among network providers, application and service providers, and content providers." (*In re Appropriate Framework for Broadband Access to the Internet over Wireline Facilities*)

Keller, Texas, becomes the first city in the nation to have Verizon's FiOS service, the first fiber-to-the-home Triple Play service.

The Digital Television Transition and Public Safety Act of 2005 sets the final day for transmission of analog television signals.

2006

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In February 2006, Congress extends the deadline for the analog to digital signals conversion to February 17, 2009.

Cable gives back to the community with over $1 billion in commercial airtime to help increase public awareness of HIV/AIDS. Cable in the Classroom provides thousands of schools with high quality commercial-free educational programming; Cable Hope Fund provides nearly $1 million towards rebuilding the Gulf Coast.

AOL introduces the first broadband TV network on the Web – AOL Television or In2TV.

For the first time, top executives of the nation's largest cable television operating companies and consumer electronics firms, discuss elements of their pending plans for system preparation and early trials of advanced-interactive digital video technologies.

CableLabs' enhanced television (eTV) specification has reached another milestone by the successful demonstration of “triggering” a Video On Demand (VOD) stream from a linear broadcast application.

CableLabs announces that a two-way plug-and-play advanced technology showcase will be a centerpiece of the CableNET® exhibit, a highlight of The 2006 National Show, the annual convention and international exhibition of the National Cable & Telecommunications Association (NCTA). The unprecedented plug-and-play display is a collection of demonstrations of the latest OpenCable technology using integrated digital devices and set tops that display advanced interactive services.

Cable operators systematically add digital High Definition (HD) television channels to program lineups, product content and services that drive consumer adoption of digital technology.

Triple Play Bundle of video programming, internet service and digital phone service boosts cable growth.

CableLabs deploys the OpenCable Application Platform (OCAP) with a wide variety of hardware devices and avoids the need to write a specific application to work with each set-top box or TV.

Blu-Ray discs are introduced by Sony.

CableLabs issues DOCSIS 3.0 specifications, which enable cable operators to offer significantly higher data rates to their broadband customers. The new specifications describe downstream data rates of 160 Mbps or higher and upstream data rates of 120 Mbps or higher.

BBC World News Network launches.

AT&T’s U-Verse fiber optic Triple Play service is commercially launched in San Antonio, Texas.

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Retirement Living TV launches.

CableLabs and EuroCableLabs issue a request for information (RFI) on DOCSIS 3.0 devices.

2007

NCTA President & CEO, Kyle McSlarrow, sends a letter to FCC Chairman, Kevin Martin and the four Commissioners, regarding recent press reports that the so-called "70/70" test in Section 612(g) of the Communications Act has been met, and that the finding will be used to assert broad new authority to reregulate the cable industry.

The tru2way Platform (formerly known as OpenCable) is a series of technical specifications that allow application developers and content providers to create and deploy interactive services for numerous devices. Tru2way provides a national distribution footprint for cable operators to deliver interactive services in nearly every U.S. market.

Project Canoe is introduced as a high-profile partnership among the nation's six largest cable companies (Comcast, Time Warner Cable, Cablevision, Cox Communications, Charter Communications and Bright House Networks) to enable national interactive advertising campaigns to be executed across the companies' cable operations. The code name "Canoe" is meant to emphasize that cable operators are working together in the same proverbial boat.

The introduction of Broadcast Exchange Format standard is presented. This interface enables near real-time data interchange between third-party vendors that support the standard. In the past, these interfaces have always involved expensive custom coding; now it can be part of the product specification.

Comcast announces the launch of **"**Our Time to Vote**,"** a year-long non-partisan voter education and registration campaign designed to increase voting in diverse communities served by the cable industry.

In switching to new digital technology in 18 months, the U.S. cable industry launches an extensive consumer education campaign, including English and Spanish language television advertising valued at $200 million; designed to reach millions of cable and non-cable viewers with useful information about the digital TV change.

The first-generation Apple TV set-top box is released.

Les Moonves, CEO of CBS, announces landmark retransmission-consent deals with nine cable operators. Total retransmission fees paid to broadcasters will grow exponentially in the following years, reaching $1.46 billion.

The California Public Utilities Commission approves rules under which video franchises will be issued on a state-wide basis.

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In order to accelerate availability of qualified DOCSIS 3.0 headend equipment, CableLabs establishes a three-tiered program for qualification of DOCSIS 3.0 cable modem termination systems (CMTS) consisting of Bronze, Silver, and Full. DOCSIS 3.0 modems have one level of certification that is representative of compliance with the full DOCSIS 3.0 specification.

CableLabs' ITU Study Group 9 recommends DOCSIS 3.0 for international standardization.

The FCC's ban begins on cable set-top boxes with integrated security, necessitating the use of devices using removable CableCards.

"Mad Men" debuts on AMC; it is AMC's first original drama series.

Big Ten Network launches.

Smithsonian Channel launches.

NHL Network launches.

Fox Business News launches.

The Third U.S. Circuit Court of Appeals in Philadelphia refuses to overturn an FCC ruling in 2005 to deregulate high-speed Internet access service that phone companies offer. The decision affirmed the status quo in which neither cable nor telephone companies need to share their networks with potential broadband competitors.

Neilsen reports that 14 percent of television households have a high-definition television with an HD tuner.

First DOCSIS 3.0 equipment is certified by CableLabs. Specifically, Casa Systems receives a silver qualification, while ARRIS and Cisco receive bronze qualifications for their CMTS gear.

2008

ARRIS and Motorola receive PacketCable certification from CableLabs, the industry's first certification for devices that integrate DOCSIS 3.0 with cable digital voice.

DIRECTV becomes the first video service provider to offer 100 HD channels and the first to offer all MPEG-4 programming.

Rogers Cable (Canada) introduces switched digital video in its Ontario system.

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The first Comcast DVR with TiVo service is shipped.

FCC auction of the 700 MHz spectrum was the most lucrative auction of the public airwaves to date, totaling $19.6 billion for licenses. AT&T Mobility and Verizon together bid about $16 billion.

Hulu launches in the United States.

Universal Sports network launches.

The FCC votes 3-2 to censure Comcast for violating Internet open-access guidelines by blocking BitTorrent peer-to-peer traffic for some customers. Comcast is ordered to reform its network management practices. Comcast appeals and the ruling is overturned by a U.S. Appeals court in 2010.

As part of a test by the FCC to iron out transition and reception concerns before the nationwide digital television transition, all of the major network stations in the Wilmington, North Carolina market cease transmission of their analog signals, making it the first market in the nation to go digital-only.

Sixty years after the first fledgling cable systems were established in Pennsylvania, Arkansas, and Oregon, the cable industry as a whole has a total revenue of $85.3 billion and serves 63.7 million television subscribers, 38.1 million residential Internet customers, and 19.6 million residential telephone customers.

2009

MLB Network launches.

Kevin Martin announces his resignation as FCC Chairman.

Comcast and General Electric announce they signed a definitive agreement to form a joint venture that will be 51 percent owned by Comcast and 49 percent owned by GE. The joint venture will consist of NBC Universal (NBCU) businesses and Comcast's cable networks, regional sports networks, certain digital properties and unconsolidated investments.

President Obama signs the DTV Delay Act to move the digital transition deadline from February 17, 2009 to June 12, 2009.

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Time Warner chairman and CEO, Jeff Bewkes, coins the phrase “TV Everywhere” to describe cable operators, telcos and DBS providers that offer content over the Internet to subscribers through online authentication.

Julius Genachowski becomes FCC chairman.

2010

HBO launches HBO GO, a website which features 600 hours of content available for streaming in standard or high definition. Content includes HBO original programming, movies, comedy specials, documentaries, sports and late-night adult programming.

The FCC unveils its National Broadband Plan.

C-SPAN Online Video Library opens to the public offering over 160,000 hours of searchable digital video.

The U.S. Court of Appeals for the District of Columbia dealt a setback to the FCC’s authority to oversee the Internet, tossing out an agency ruling that forces Comcast Corporation to change the way it manages its broadband network. (*Comcast Corp v Federal Communications Commission*)

ESPN 3D launches.

CBS and Comcast sign a 10-year deal on retransmission-consent fees that represents hundreds of millions of dollars in new revenue for CBS, and lays the groundwork for Comcast subscribers to view CBS programming online through authentication.

FEARnet HD launches.

A retransmission fee dispute between Cablevision and News Corporation results in Fox stations being blacked out for 3 million New York metropolitan-area subscribers. The blackout lasts until October 31, with viewers missing the first two games of the World Series.

FCC issues its Open Internet Order, regarding net neutrality. The main tenets are: fixed and mobile broadband providers must disclose their network management practices, performance characteristics, and terms and conditions of their broadband services; fixed broadband providers may not block lawful content, applications, services or non-harmful devices; mobile broadband providers may not block lawful websites or block applications that compete with their voice or video telephony services; and fixed broadband providers may not unreasonably discriminate in transmitting lawful network traffic. Wireless providers are regulated more loosely than fixed-line providers.

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2011
C-SPAN launches American History TV.

Comcast completes takeover of NBC Universal, acquiring 51 percent of the company from General Electric. Comcast relinquishes its minority rights in Hulu as part of a deal that took 13 months to be approved by regulators.

Shaw Communications in Canada becomes the first major MSO in North America to offer “a la carte” channel selection. Customers can now choose channels within designated tiers.

Michael K. Powell is announced as president and CEO of NCTA.

Kansas City is announced as the first Google Fiber city.

Netflix announces that it has 23.6 million subscribers in the United States and over 26 million worldwide.

The new “Cross Platform Report” from Nielsen reports that HDTVs are now available in 75.5 million homes; about two thirds of all homes and a 20 percent increase over the previous year.

Nat Geo Mundo launches.

Analysis by Sanford Bernstein shows the cable industry is currently capturing 60 percent of the U.S. broadband market.

Microsoft announces deals with over 40 content owners and Pay TV operators worldwide to distribute content through its Xbox 360 gaming console. New partners include HBO, Bravo, Syfy, NBC's “Today”, Comcast, Verizon, Bravo, Crackle, Epix, TMZ, UFC, AlloCine, Dailymotion, iHeartRadio, MSN with MSNBC.com, Vevo, and YouTube. Existing partners include AT&T U-verse, ESPN, Netflix and Hulu Plus in the U.S.; Telus in Canada; BSkyB in the U.K.; Canal Plus in France; Vodafone in Portugal; VimpelCom in Russia; and Foxtel in Australia.

2012
Disney and Comcast announce a comprehensive 10-year carriage deal that encompasses 25 Disney-owned networks and more than 70 services. The deal is seen as a catalyst to accelerate the TV Everywhere initiative for the entire industry.

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Aereo launches its streaming television service in the New York area despite lawsuits from local television stations.

Disney Junior launches.

C-SPAN founder, chairman, and CEO Brian Lamb steps down after guiding the network for 33 years. New co-CEOs are Rob Kennedy and Susan Swain, who had been named co-presidents in 2006.

Univision Deportes and Univision Deportes Dos launches.

Comcast announces its first rollout of the next-generation X1 DVR platform in Boston – significant as a hybrid IP/QAM platform with cloud-based navigation, interactive program guide, HTML5 with customized apps and social media features.

HBO GO launches on the Amazon Kindle Fire.

Comcast announces it will eliminate the 250-gigabyte monthly broadband-usage limit on XFINITY Internet and is moving towards a usage-based pricing model that will provide at least 300 GB of data usage before customers incur additional charges.

Google announces acquisition of Motorola Mobility Holdings, Inc.

World IPv6 Launch Day underwhelms millions.

The United States Supreme Court rules against the FCC in the case of *FCC v. Fox Television Stations* and *FCC v. ABC Inc.,* No. 10-1293, saying that the FCC had not given fair notice of new policies regarding indecency before fines were levied against the two broadcasters for broadcasting brief nudity and cursing.

Regulators approve the sale of $3.9 billion in wireless spectrum licenses to Verizon Wireless from large cable operators including Comcast, Time Warner Cable, Cox Communications and Bright House Networks.

Liberty Global launches its Horizon TV platform, which enables home networking, TV Everywhere services, and Internet apps.

Google Fiber network becomes operational in Kansas City.

DOCSIS 3.1 spec introduced by CableLabs, will eventually allow acceleration of HFC networks from tens of megabits per second to up to 10 Gbps.

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Roku releases the first streaming stick – a version of its streaming box miniaturized to the size of a USB drive and designed to work with any television equipped with a Mobile High-Definition Link (MHL) port.

2013

Comcast agrees to pay $16.7 billion to buy General Electric's 49 percent stake in NBC Universal. Comcast took control of NBC Universal in early 2011 by acquiring 51 percent of the media company from General Electric.

Cablevision sues Viacom for anti-trust violations in bundling its channels. In a statement, Cablevision said "Viacom effectively forces Cablevision's customers to pay for and receive little-watched channels in order to get the channels they actually want".

ARRIS announces the completion of its acquisition of Motorola Mobility Home from Google for $2.3 billion.

YouTube unveils its paid-subscription channels which allow some video creators to charge viewers a monthly fee to view certain content.

AMC's "The Walking Dead" ranked #1 in all of television for the 18-49 demographic, outperforming all programs for the 2013/14 season. Additionally, the zombie hit is rated the #1 cable series ever telecast, based on live plus same-day ratings.

Both cable and telco Internet Service Providers (ISP) benefited when the Supreme Court denied an appeal by several power companies which challenged an FCC pole-attachment order aimed at cutting pole-attachment costs. (The 2011 FCC order sought to streamline the pole attachment process for service providers) Consequently, service providers will save costs on pole attachments due to this ruling.

In November, Tom Wheeler is appointed FCC chairman by President Obama and confirmed by the U.S. Senate. Wheeler was NCTA president from 1979 to 1984, and CEO of the Cellular Telecommunications & Internet Association, 1992-2004

Liberty Global purchases Virgin Media for $16 billion, making it the largest cable operator in the United Kingdom. Along with the 2011 acquisition of German cable company KBW for $4.48 billion, Liberty Global became the No. 2 MSO there – securing its status as the continent's dominant cable operator. Liberty Global is the largest cable operator in Europe, with 27 million subscribers.

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2014

A U.S. Court of Appeals overrules federal regulations provided in the FCC's Open Internet Order, which required broadband providers apply net neutrality or equal treatment of Internet traffic.

Comcast proposes to buy Time Warner Cable in an all-stock $45.2 billion deal, valued at the share price of $158.82. The deal will increase Comcast's video-subscriber rolls to approximately 30 million, after an expected divestment of 3 million Time Warner Cable subscribers.

Amazon announces the release of its Fire TV streaming device that features voice search and also allows access to online games.

The U.S. Supreme Court rules against Barry Diller's Aereo service, saying they infringed on the copyright rights of the major television networks by streaming their content to paid subscribers. Aereo was capturing broadcast signals with many small antennas leased to its customers and then streamed the content to them for $8 to $11 per month.

The 17 largest U.S. cable operators and telecoms in Q2 added almost 385,000 net broadband customers, a 130 percent increase over the same period in 2013, Leichtman Research has found. The major cable providers, not including WideOpenWest, now have slightly more broadband customers than TV subscribers.

Former Vice President, Al Gore, is suing Al Jazeera America, claiming the programmer has withheld $65 million of proceeds from the sale of Current TV.

HBO dominates the Emmys with 19 wins overall, including victories for best movie, best director and outstanding lead actress. The PBS series, "Sherlock", led all shows with seven awards, followed closely by "Breaking Bad" (AMC) with six wins in its final year of Emmy consideration.

The FCC votes unanimously to end its sports blackout rule, which prohibited cable and satellite TV providers from showing games in local markets where the stadium is not sold out.

The fifth season of AMC's "The Walking Dead" scores the highest ratings in series history. It drew 17.3 million viewers and 11 million 18-49 year old viewers. The series continues to be the #1 television show among these 18-49s.

A standalone over-the-top version of HBO GO is confirmed to launch in 2015.

Ultra HD 4K televisions are released to consumers.

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Leichtman Research reports that 79 percent of U.S. households get broadband at home, compared to just 20 percent in 2004. Broadband now accounts for 95 percent of all households with Internet service at home – an increase of 94 percent last year, 89 percent in 2009 and 33 percent in 2004. The 18-34 year old age group reports spending more time per day online at home than time spent watching TV (a first for the 12-year report).

AMC Networks announced that it will invest $200 million to acquire a 49.9 percent stake in BBC America in a deal that will give AMC operational control over the BBC America network, including affiliate and advertising sales.

Comcast rolls out the Xi3, an all-IP HD video platform for XI users.

The U.S. Senate has followed the House by unanimously approving a five-year extension of the satellite compulsory license reauthorization, in a bill that also ends the integrated set-top prohibition and includes some retransmission-consent reforms.

According to SNL Kagan, Public MSOs posted annual revenue and cash flow gains in the third quarter as high-speed data subscriptions for the first time surpassed video customers.

2015

Viacom takes a 50 percent stake in five TV networks in India, where about half of the country's 250 million homes do not yet have pay-TV service.

Cablevision introduces a low-cost mobile phone service that works using a Wi-Fi connection. The service, the first such offering from a cable provider, will be called Freewheel and will provide unlimited data, talk and text globally.

The Federal Communications Commission votes 3-2 to boost the broadband definition to 25 Mbps for downloads and 3 Mbps for uploads, up from 4 Mbps/1 Mbps. The move had been questioned by Comcast, AT&T and Verizon Communications in comments filed with the FCC, and the National Cable & Telecommunications said that the new standard was "arbitrary and capricious."

The Federal Communications Commission votes 3-2 to approve Chairman Tom Wheeler's proposal to reclassify broadband Internet service as a utility, placing it under the purview of Title II of the Communications Act. The new rules ban broadband providers from throttling or speeding up traffic from specific sites.

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ARRIS Group and Charter Communications, through a newly created joint venture, have acquired cloud video firm ActiveVideo for $135 million. ActiveVideo customers include Roku, Cablevision, Time Warner Cable and Charter, which based its Spectrum Guide on ActiveVideo technology.

European cable operator Altice enters the U.S. market by buying Suddenlink for $9.1B

Comcast abandons its planned $45 billion purchase of Time Warner Cable due to regulatory hurdles

Charter Communications buys Time Warner Cable for $78.1 billion and Bright House Networks for $10.4 billion to create a single company with 24 million subscribers

Industry associations and companies opposed to the FCC's Open Internet Order file their first briefs on July 31 in the legal battle against the FCC's reclassification of ISPs under Title II common carrier rules. The petitioners include US Telecom Association, National Cable & Telecommunications Association, CTIA – The Wireless Association, American Cable Association, the Wireless Internet Service Providers Association, AT&T and CenturyLink

AT&T completes its acquisition of DIRECTV for $67 billion, including net debt, after FCC approval is announced. The merger was announced in May of 2014

Altice buys Cablevision, for about $17.7 billion, to create the fourth-largest cable operator in the U.S. Cablevision was founded by Chuck Dolan in 1973

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