Chapter 12

Cable, Satellite, and Internet Television

This chapter will prepare students to:

- Trace the development of cable, satellite, and Internet television
- Describe the implications of the digital age for these media
- Understand the structure, content, and finances of cable, satellite, and Internet TV
- Appreciate the potential of Internet TV
- Explain the audience measurement techniques used for these media

Chapter main points:

1. Cable TV began in the 1950s as a way of bringing TV signals to places that could not otherwise receive them.
2. Cable TV reached maturity by the turn of the century and was facing competition from DBS satellite systems.
3. The Telecommunications Act of 1996 permitted cable and telephone companies to compete with one another.
4. Internet TV developed in the late 1990s and became more popular with the growth of broadband.
5. Cable and satellite systems are structured differently from those of conventional TV
6. Cable television is dominated by large multiple system operators. Two companies, DirecTV and the Dish Network, are the leading DBS providers.
7. Internet video can be categorized by source (professional or amateur) and content (original or repurposed).
8. User-generated video, such as those on YouTube, has become extremely popular.
9. Internet video sites make money by charging a fee for their content or by selling advertising.

10. Nielsen provides rating data for cable/satellite networks. Ratings for online video-sharing sites are provided by companies that measure Internet usage.

Broadcast networks and local TV stations are no longer the only players in the game. They’ve been joined by cable and satellite networks, as well as by Internet video.

**A BRIEF HISTORY OF CABLE, SATELLITE AND INTERNET TELEVISION**

Cable TV began in the 1950s as a device to bring conventional TV signals to isolated areas that could not otherwise receive the signals. As cable grew, some systems imported signals from distant stations. When the FCC lifted nearly all of its cable restrictions in 1980, the cable industry enjoyed increased freedom.

The first satellite TV transmission occurred in 1962, but satellite TV came of age in 1976. Satellite-distributed channels multiplied and gave people in urban and suburban areas a reason to subscribe to cable. By the end of the 1980s, the cable industry was dominated by large **Multiple System Operators (MSOs)**, and the locally-owned cable system was disappearing. By 2010, about 61 million households subscribed to cable.

Cable got a competitor in the mid-1990s from high-powered **direct broadcast satellites (DBS)** that could send a signal directly to the home. This allowed consumers to bypass the cable system altogether. Eventually, satellite TV became dominated by two companies.

The most significant developments in the cable industry in the last two decades have been legal ones. Reversing a deregulation trend and acceding to subscriber complaints, Congress passed the 1992 Cable Television Consumer Protection Act, which resulted in an average 17 percent reduction in rates. In addition, the act mandated that broadcasters choose between **must carry** (the local cable system had to carry the station’s signal) or **retransmission consent** (the local station had the right to negotiate compensation for carriage of its signal). Initially, most broadcasters opted for consent, with compensation being promotional time on the system or space for their own networks. The situation has changed, though, as broadcasters searching for more revenue streams began demanding payment for carrying their programs.

In other areas, the Telecommunications Act of 1996 gave telephone companies the right to enter the cable business (and vice versa). Telephone and cable companies could own competing systems in a community. The act also allowed cable companies to set their own rates. The competition took a while to materialize, but by the middle of the decade, cable companies offered an alternative to traditional phone lines: **voice-over-internet protocol (VOIP)**.
Cable experienced growing pains. New cable networks found it hard to break into existing cable systems because of a lack of space. And like broadcast networks, cable TV fell victim to audience fragmentation. On the bright side, cable continues to draw viewers away from broadcast TV, and cable systems offer high-speed Internet access to their customers.

The late 1990s introduced a new way to distribute TV signals: Internet TV, or webcasting. The key to webcasting is streaming, in which a computer stores video signals (a process called buffering) and plays the signals back even while it continues to store new, incoming signals. Early online video efforts grew slowly, mostly because most people had slow dial-up connections. Broadband connections, and the ease with which video can be uploaded, have helped fuel an explosion of user-generated content.

The podcast is yet another channel for web video. A podcast is a program downloaded from a web site and played back at the user’s convenience on a computer or MP3 player.

### CABLE, SATELLITE AND INTERNET TV IN THE DIGITAL AGE

#### Transition

All three of these delivery systems are firmly established in our digital age. Internet TV has always been digital, and satellite and cable systems use digital technology to distribute programs.

Cable and satellite systems can use digital technologies to allow video on demand, interactive program guides, high-definition TV, and digital video recorders (DVRs). Digital signals can be compressed, thus allowing additional channels to be transmitted over a single system. Cable systems also use digital technology to provide both telephone and Internet service to their subscribers. Telephone and cable companies are offering a “bundle” of services – Internet, TV, phone – for a lower price. Satellite systems have trouble matching this feature.

#### Mobile Media and Apps

Broadcast TV and cable/satellite networks have embraced mobile media by offering apps so viewers can see TV shows and movies.

#### User-Generated Content

Like the broadcast industry, cable and satellite networks are increasingly turning to user-generated video. CNN’s I-Report feature allows people to send video to the news channel, and the video might make it on the air. The biggest place to find user-generated content from politicians, advertisers, aspiring entertainers and others is at Internet like YouTube.
**Social Media**

Cable and satellite network Web sites make extensive use of social media. All the major channels have Facebook pages, Twitter accounts and LinkedIn profiles.

**DEFINING FEATURES OF CABLE, SATELLITE, AND INTERNET TV**

Users must have at least one extra piece of equipment to receive video from these sources, such as a set-top box, a satellite dish, or a computer and modem. Users pay extra to receive services. Even “free” content on the Internet requires users to pay for Internet access.

The channels appeal to highly differentiated audiences. Whereas broadcasters try to reach a huge, mass audience, cable/satellite systems carry specialized channels. Even though some mass appeal TV shows or movies are available via the Internet, broadcasters and movie distributors don’t expect them to draw a mass audience.

**CABLE, SATELLITE INDUSTRY ORGANIZATION**

**Structure: Cable TV**

Cable systems are structured differently from those of conventional TV. There are three main components in a cable system:

- *head end* — equipment that receives and processes TV signals
- *distribution system* — cables that deliver signals to subscribers. The main cable is the trunk.
- *house drop* — the part connecting the feeder cable to a subscriber’s TV set; drops can be one-way or two-way depending if signals can be sent to the head-end by the subscriber

**Programming and Financing: Cable TV**

Programming and financing perspectives are different for local cable systems and national cable networks.

**Local Operators.** The six sources of programming for a local cable system are:

- *local origination:* includes cable studio shows, government programs, local school sports, public access channels
• **local broadcast TV stations**: include local channels and perhaps channels from nearby cities

• **superstations**: are local stations whose signals are carried by many systems nationwide; the original superstation, WTBS (Atlanta), evolved into a cable network in 1998

• **special cable networks**: are services distributed by satellite to cable systems. Most are advertiser supported. Examples are MTV, the Weather Channel, USA Network

• **pay services**: are commercial-free channels that typically provide movies and original programming. These include HBO, Showtime, Cinemax, the Movie Channel

• **pay-per-view and video-on-demand channels**: are set aside to show recent films, special sports and entertainment events. Subscribers pay for the programs.

A local cable system has two basic sources of income: subscription fees from consumers and local advertising.

Cable systems are very expensive to set up, and the operators must pay for maintenance as well as programming. Pay-cable, video-on-demand, and pay-per-view account for more than half of cable operators’ revenue. Local advertising, though growing, amounts to only about 20 percent.

**National Operators.** The three major sources of programming for a national cable operator are:

• **original productions** – CNN, ESPN, C-SPAN create all their content

• **movies** – HBO, Showtime, Cinemax specialize in providing theatrical films

• **syndicated programs** – USA Network and Lifetime depend on syndicated programs such as network reruns and game shows

A national cable service system has three basic sources of income: subscription fees, carriage fees (the fee cable networks charge local systems to carry their programming), advertising

**Pay-per-View (PPV)**

Sporting events, movies, concerts, and adult content are PPV’s biggest draw. PPV started well but has fallen on hard times. Video on demand and digital cable channels could affect the future of PPV. Still, the potential for big money exists.

**Video-on-Demand (VOD)**

VOD allows users to search for content that has been stored on the cable/satellite company’s server, and select what they want to watch. The content is then sent immediately to the person’s TV set. Most services charge a fee per program.

VOD has been around for years, but was slow to catch on. There was a relative lack of content, and the interfaces were complicated for users. With more content and a simplified ordering system, VOD use is up.
Structure: Satellite TV

Satellite systems contain five elements:

- content providers who send their signals to:
- broadcast centers that take the content and transmit it to:
- geosynchronous communication satellites that receive the programs from the broadcast center and send them back down to:
- small satellite receiving dishes that pick up the signal and transmit to:
- satellite receivers that transforms the signal for viewing on the TV set

Geosynchronous satellites have orbit patterns that keep them in the same spot over the earth. Satellite signals are compressed to allow a greater number of channels to be transmitted. The signals are encrypted so that people who haven’t subscribed to the service cannot view the content. A satellite receiver does the decrypting.

Programming and Financing: Satellite TV

The same programming carried by major cable companies is also distributed by satellite. This includes the local broadcast stations, superstations, non-broadcast networks, pay services, and pay-per-view. Unlike cable, satellite networks are national, with no local generation of programs.

The biggest revenue source for satellite companies is a monthly subscription fee. Satellite companies charge extra for DVRs, HDTV, and additional receivers. Unlike cable, local advertising is not a significant revenue stream.

Like cable, the biggest expense for satellite companies is hardware. Launching and maintaining satellites is expensive; installing and servicing dishes and receivers is expensive. Satellite providers pay content producers for the rights to carry programs.

Satellite companies are must compete with cable’s ability to bundle voice, video, and high-speed Internet access. In response, satellite providers are exploring alliances with other companies.

Ownership of Cable and Satellite TV

The ownership trend in cable, as in other media, has been toward consolidation. Comcast and Time-Warner serve more than half of all cable customers. In satellite, two major companies dominate the market – DirecTV and Dish Network.
Recently, due to faster connections and easy-to-use software, there’s been an explosion of video on the Web. Most major corporations and businesses include video on their web pages. Full-length movies and TV shows are easily available.

Compared to starting a cable or satellite TV channel, starting an Internet TV channel is easy. All it takes is a camera, a computer, some software, and a website. The explosion of video on the Internet is another indication that the convergence between TV set and computer is well on its way.

**Structure: Sources and Content**

One way to analyze web video is to classify it by:

- *source*: is the content produced by **amateurs** or **professionals**?
- *content*: is the content **original** or **repurposed**?

**Professionally Produced Content.** Most major companies now have professionally produced video on their Web sites. Professional video sources include:

- commercial media companies (e.g., ABC.com)
- content aggregators (e.g., Netflix)
- PR firms (e.g., leoburnett.com)
- companies that sell products/services (e.g., Amazon.com)
- political figures (e.g., www.Newt.org)
- service organizations (e.g., USO)
- government agencies (e.g. Social Security)

They either have their own in-house production facilities or hire an outside production company to put together the video.

In terms of content, it can be either original to the Web or produced for some other purpose, then posted online. Original content is available at Crackle.com, TV.com and thewb.com.

Advertisers and marketers are another source of professional produced original video, for example, Ford has a YouTube channel. Politicians make heavy use of Internet video, with clips of speeches and campaign rallies.

**Amateur-Produced Content.** Most amateur-produced content is original, though posting a home-made wedding video on YouTube might be considered a repurposing of amateur content. It’s estimated that more than half of all online videos are amateur productions. The subject matter is so diverse that it’s difficult to categorize it. Most are short clips, seldom over five minutes.
Homemade video is the ultimate example of user-generated content and has spawned a Web industry of video sharing, as seen on YouTube, where about 2 billion videos are viewed per day.

Problems include illegally posting copyrighted material and invasion of privacy.

**Microcasting**

Microcasting refers to sending a message to a small group of interested people, an example of the “few-to-few” model of communication. (This is contrasted with broadcasting, which means sending a message to a large, heterogeneous group of people and narrowcasting, for targeting a message to a small, well-defined sub-segment of the total audience.) Examples include a church service, babysitting service, funeral, training session, and so on).

Internet-capable cell phones with video cameras allow ideas for microcasts to become endless, such as sending videos of high school sports games or funeral services to relatives.

In some ways, Internet video is becoming more like a traditional mass media channel (e.g., people use it to watch Hollywood movies); in other ways it’s becoming more like machine-assisted interpersonal communication (e.g., people use it within Facebook to share their experiences).

**Economics of Online Video**

An online video site can make money by:

- subscription fees – a viewer pays a fee to see programs
- merchandising – selling items related to the video site
- advertising
- a combination of the above

**CABLE, SATELLITE AND INTERNET TV FEEDBACK**

Feedback on who is watching cable and satellite networks are measured by Nielsen Media Research using the same techniques used for broadcast TV: a national sample using People Meters reported in terms of ratings and shares.

Gathering feedback on Internet video is a new and difficult area. The Nielsen Company uses a VideoCensus service which combines panel data with usage data. A firm called comScore tracks video viewing using people who agree to install tracking software on their computers. The numbers from the two services sometimes differ widely.
**Audience**

More than 85 percent of U.S. households get television from cable or satellite providers. Subscribers tend to be younger, have more children, and be more affluent than non-subscribers. Cable/satellite networks are more specialized than broadcast networks, so the demographic makeup of their audiences varies.

Some preliminary data about the audience for online videos revealed that about 150 million Americans watch online video. Men are more likely than women to be viewers, and men tend to watch short, amateur-produced videos while women watch more professionally produced full episodes. Young people watch more than older people, and the most popular sites for watching Web video are YouTube and the networks’ Web sites. The average time spent watching online video is about 10-20 minutes a day.

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**CABLE, SATELLITE AND INTERNET TV INDUSTRIES**

The cable and satellite industry is smaller than the broadcast TV industry, and the number of employees working in Internet TV is difficult to determine. However, the job prospects, especially in Internet video, seem more positive than in other media.

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