# RADIO RIDING NEW WAVES



iHeartRadio is an Internet radio service that streams stations owned by iHeartRadio Inc.
(formerly Clear Channel) throughout the U.S. iHeartRadio sponsored a music celebration at the 2015 Consumer Electronics Show in Las Vegas.

## What's Ahead?

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# "Our ultimate goal is to help artists across the spectrum build and maintain their careers."

-TIM WESTERGREN, FOUNDER, PANDORA RADIO

Today, the nation's collective memory and impressions about events that happened in the first half of the 20th century are directly tied to radio. Newspapers offered next-day reports and occasional extras, and magazines offered long-term analysis. But radio gave listeners an immediate news record at a time when world events demanded attention. Radio also gave people entertainment, including sports, big bands, Jack Benny, George Burns and Gracie Allen, Abbott and Costello and Bob Hope.

Radio transformed national politics by transmitting the sounds of public debate, as well as the words, to the audience. Radio also expanded Americans' access to popular as well as classical culture. Opera played on the same dial as slapstick comedy; drama and music shared the airwaves with sports—all supported by advertising.

## Radio Sounds Are Everywhere

The legacy of news and music remains on radio today, but the medium that once was the center of attention in everyone's front room has moved to the bedroom, the office, the car and the mobile phone. Radio can wake you up and put you to sleep. Radio goes with you when you run on the trail or sit on the beach. Internet radio even follows you to your desk at work. Consider these industry statistics about radio today:

- ▶ 99 percent of America's homes have radios.
- ▶ 95 percent of America's cars have radios, and radio reaches 3 out of 5 adults in their cars at least once a week.

- ▶ 70 percent of the nation's cars are equipped to receive SiriusXM satellite radio, and 30 percent of all cars sold in 2015 are equipped with Pandora Internet radio.
- ▶ 40 percent of Americans listen to the radio each day sometime between 6 a.m. and midnight.
- ▶ Weekly Internet radio listening is at an all-time high—39 percent of the U.S. population.

Although radio is more accessible today, what you hear is not the same as what your great-grandparents heard. Advertisers, who once sought radio as the only broadcast access to an audience, have many more places to put their ads. For audiences, radio has become an accessory rather than a necessity. No one envisioned radio's place in today's media mix when radio's pioneers began tinkering just before the turn of the 20th century. All these pioneers wanted to do was figure out how to send sounds along a wire.

## Radio Takes a Technological Leap

Today we are so accustomed to sending and receiving messages instantaneously that it is hard to imagine a time when information took more than a week to travel from place to place. In the early 1800s, stagecoaches had to travel 44 hours to bring news from New York City to Washington, D.C. In 1860, the Pony Express took 10 and a half days to go from St. Joseph, Missouri, to San Francisco.

## TimeFrame 1899–Today

# Digital Technology and Standardized Programming Chase the Audience





**1906–1907** Reginald Aubrey Fessenden transmits the first voice and music broadcast. Lee de Forest introduces the Audion tube.

**1920** Station KDKA in Pittsburgh goes on the air, the nation's first commercial radio station.

**1934** Congress establishes the Federal Communications Commission to regulate broadcasting.

1936 Edwin H. Armstrong licenses frequency modulation (FM).

**1938** *Mercury Theatre on the Air* broadcasts "The War of the Worlds," demonstrating how quickly broadcast misinformation can cause a public panic.

\* 1948 The first transistor radios are sold, making radio portable and expanding radio's reach to audiences outside the home and the car.

1959 Gordon McLendon introduces format radio at KABL in San Francisco.

**1960** The Manhattan grand jury indicts disc jockey Alan Freed for payola.

**1970** National Public Radio (NPR) goes on the air. By design, public radio is created as an alternative to commercial radio.

**1996** Congress passes the Telecommunications Act of 1996, which encourages unprecedented consolidation in the radio industry.

**2001** Sirius Satellite Radio and XM Radio begin offering digital satellite radio service.

**2005** The New York Attorney General charges that payola still is pervasive in the radio industry.

Radio broadcasters form the HD Digital Radio Alliance to promote HD radio.

Internet radio pioneer Tim Westergren launches Internet radio service Pandora to offer free and subscription music online.

**2008** Satellite radio companies XM and Sirius merge to become SiriusXM.

The Nielsen Company, which provides ratings for television, launches a radio ratings service, ending Arbitron's monopoly on radio ratings.

**2009** Pandora Internet radio reaches a royalty-fee agreement with a group representing artists and record labels, which frees Pandora to legally expand its Internet radio services.

**2012** Nielsen buys Arbitron, consolidating radio ratings into one company.

**2015** Pandora Radio is installed in 30 percent of all new cars sold in the U.S.

TODAY The broadcast radio industry is concentrated primarily in large groups of stations that use standardized formats, and faces strong competition from satellite and Internet radio. Most broadcast radio stations have a presence on the Internet. Radio broadcasters are competing with Internet radio entrepreneurs for the audience.





Technological advances brought rapid changes in how quickly information could move throughout the country. First came the invention of the telegraph and the telephone, which depended on electrical lines to deliver their messages, and then wireless telegraphy, which delivers radio signals through the air.

In 1835, Samuel F. B. Morse first demonstrated his electromagnetic telegraph system in America. In 1843, Congress gave him \$30,000 to string four telegraph lines along the Baltimore & Ohio Railroad right of way from Baltimore to Washington, D.C. Morse sent the first official message—"What hath God wrought?"—from Baltimore to Washington, D.C., on May 24, 1844.

Telegraph lines followed the railroads, and for more than 30 years Americans depended on Morse's coded messages printed on tape, sent

from one railroad station to another. On March 10, 1876, *Alexander Graham Bell* sent a message by his new invention, the telephone, to his associate Thomas A. Watson in an adjoining room of their Boston laboratory: "Mr. Watson, come here. I want you." Both Morse's telegraph and Bell's telephone used wires to carry messages.

Then in Germany in 1887, the physicist *Heinrich Hertz* began experimenting with radio waves, which became known as Hertzian waves—the first discovery in a series of refinements that eventually led to the development of radio broadcasting.

## Broadcasting Is Born

Broadcasting was truly a revolutionary media development. Imagine a society in which the only way you can hear music or enjoy a comedy is at a live performance or by listening to tinny noises on a record machine. The only way you can hear a speech is to be in the audience. Movies show action but no sound.

Without the inventions of broadcasting's early pioneers such as Heinrich Hertz, you could still be living without the sounds of media that you have come to take for granted. Four pioneers besides Hertz are credited with advancing early radio broadcasting in America: Guglielmo Marconi, Reginald Aubrey Fessenden, Lee de Forest and David Sarnoff.

## Wireless Breakthrough: Guglielmo Marconi

Twenty-year-old Guglielmo Marconi, the son of wealthy Italian parents, used the results of three discoveries by Morse, Bell and Hertz to expand his idea that messages should be able to travel across space without a wire. Marconi became obsessed, refusing food and working at home in his locked upstairs room. Soon Marconi was able to ring a bell across



In many parts of the world today, radio is a necessity. In March 2015, a Nigerian man listens to the results of his country's election.

the room or downstairs without using a wire. Eventually he was able to broadcast over a distance of 9 miles. "The calm of my life ended then," Marconi said later.

The *New York Herald* invited Marconi to the United States to report the America's Cup race in October 1899. Marconi reported "by wireless!" American businesspeople, intrigued by the military potential of Marconi's invention, invested \$10 million to form American Marconi.

To experiment with the new discovery, amateur radio operators created radio clubs. Two experimenters, Reginald Aubrey Fessenden and Lee de Forest, advanced Marconi's discovery to expand radio's popularity.

## Experimental Broadcasts: Reginald Aubrey Fessenden

Reginald Aubrey Fessenden, a Canadian, began wireless experiments in the U.S. in 1900 when he set up his National Electric Signaling Company to attempt to send voices by radio waves. On Christmas Eve 1906, "ship wireless operators over a wide area of the Atlantic . . . were startled to hear a woman singing, then a violin playing, then a man reading passages from Luke. It was considered uncanny; wireless rooms were soon crowded with the curious," wrote broadcast historian Erik Barnouw.

The noises were coming from Fessenden's experimental station at Brant Rock, Massachusetts. Fessenden's 1906 experiment is considered the world's first voice and music broadcast.

## Detecting Radio Waves: Lee de Forest

Lee de Forest called himself the father of radio because in 1907 he perfected a glass bulb called the Audion that could detect radio waves. "Unwittingly then," wrote de Forest, "had I discovered an invisible Empire of the Air." Besides being an inventor, de Forest was a good promoter.

He began what he called "broadcasts" from New York and then from the Eiffel Tower.

In 1910, de Forest broadcast Enrico Caruso singing at the Metropolitan Opera House. Later his mother broadcast an appeal to give women the vote. Gradually, the Audion became the technical foundation of modern broadcasting.

## A Household Utility: David Sarnoff

In 1912, 21-year-old wireless operator David Sarnoff relayed news from Nantucket Island, in Massachusetts, that he had received a distress call from the *Titanic* on his Marconi wireless. Four years later, when Sarnoff was working for the Marconi Company in New York, he wrote a visionary memo that predicted radio's future, but originally his ideas were widely ignored.

"I have in mind a plan of development which would make radio a household utility. The idea is to bring music into the home by wireless," Sarnoff wrote. Eventually, as commercial manager and then president of RCA, Sarnoff watched his early vision for radio come true, and RCA became the nation's primary radio distributor.

## Federal Government Regulates the Airwaves

The federal government decided to regulate broadcasting almost as soon as it was invented. This decision to regulate separated the broadcast media, which are regulated by the federal government, from print media, which are not regulated directly by any federal government agency.

As amateurs competed with the military for the airwaves, Congress passed the Radio Act of 1912 to license people who wanted to broadcast or receive messages. The federal government decided to license people to transmit signals because there only were a certain number of frequencies available. Many amateurs, trying to send signals on the same frequency, were knocking each other off the air, so the government intervened to try to keep the operators out of each other's way.

Then, during World War I, the federal government ordered all amateurs off the air and took control of all privately owned stations, and the military took over radio broadcasting. After the war, the federal government lifted the freeze, and the Navy argued that the military should maintain the monopoly over the airwaves that it had enjoyed during the war.

## **Government Approves Commercial Broadcasting**

Faced with strong arguments by the amateurs who wanted to return to the airwaves, Congress decided against a Navy monopoly. Instead, the government sanctioned a

private monopoly formed by General Electric, Westinghouse, AT&T, Western Electric Company and United Fruit Company. General Electric (GE) bought out American Marconi and its patents, and in 1919, these five sympathetic interests pooled the patents they controlled to form Radio Corporation of America (RCA).

David Sarnoff became RCA's general manager in 1921. Because of this early monopoly, RCA dominated radio development for many years, but eventually smaller operations formed all over the country as radio fever spread nationwide.

## **Experimental Stations Multiply**

A plaque placed on a building in San Jose, California, in 1959 celebrates the 1909 founding of the experimental station FN: "On this site in 1909, Charles D. Herrold founded a voice radio station which opened the door to electronic mass communication. He conceived the idea of 'broadcasting' to the public, and his station, the world's first, has now served Northern California for half a century." Today, KCBS is based in San Francisco.

Various other stations claim they were among the earliest radio pioneers. Station 9XM broadcast music and weather reports from Madison, Wis.; 6ADZ broadcast concerts from Hollywood, Calif.; 4XD sent phonograph music from a chicken coop in Charlotte, N.C.; and 8MK in Detroit, operated by *Detroit News* publisher William E. Scripps, transmitted election returns.

These stations were run by amateur radio operators who broadcast messages to each other and their friends but not to the public; nevertheless, they are early examples of broadcast entrepreneurs. They were tinkerers, fascinated with an invention that could carry sounds through the air. One of these tinkerers, Frank Conrad, is credited with creating the beginnings of the nation's first commercial radio station.

## **KDKA Launches Commercial Broadcasting**

An ad in the September 29, 1920, Pittsburgh Sun changed broadcasting from an exclusive hobby to an easy-touse medium available to everyone. The ad described a 20-minute evening concert broadcast from the home of Frank Conrad, a "wireless enthusiast" who worked for Westinghouse.

Conrad often broadcast concerts from his garage on his station, 8XK, but his boss at Westinghouse, Harry P. Davis, had an idea: Why not improve the broadcasts so more people would want to buy radios? Davis talked Conrad into setting up a more powerful transmitter at the Westinghouse plant by November 2, 1920, so Conrad could broadcast election returns.

On October 27, 1920, using the powers of the 1912 Radio Act, the U.S. Department of Commerce licensed



The nation's first commercial radio station, KDKA in Pittsburgh, went on the air in 1920. A group of musicians, including Stanley Turrentine on saxophone, Tommy Turrentine on trumpet and Willie Love on saxophone, offered live music on KDKA in 1943.

station KDKA as the nation's first *commercial* radio station. The broadcast began at 8 p.m. on November 2, 1920, and continued past midnight, reporting that Warren G. Harding was the nation's next president. KDKA immediately began a daily one-hour evening schedule, broadcasting from 8:30 to 9:30 p.m.

## Radio Audience Expands Quickly

The crude KDKA broadcasts proved that regular programming could attract a loyal audience. KDKA was just the beginning of what eventually became radio networks. The radio craze led almost immediately to a period of rapid expansion as entrepreneurs and advertisers began to grasp the new medium's potential. Almost as quickly, government was compelled to step in to expand its regulation of radio broadcasting.

Radio's potential as a moneymaker for its owners fueled competition for the airwaves. Three important developments for radio's future were the

- 1. Blanket licensing agreement
- **2.** Decision that radio would accept commercial sponsors
- 3. Radio Act of 1927

## Blanket Licensing

At first, stations played phonograph records; then they invited artists to perform live in their studios. Some of the nation's best talent sought the publicity that radio could give them, but eventually the performers asked to be paid.

In 1923, the American Society of Composers, Authors and Publishers (*ASCAP*) sued several stations for payment. ASCAP claimed that if radio aired ASCAP-licensed music, people would buy less sheet music, cheating ASCAP members out of royalties. Station owners argued that playing the songs on their stations publicized the sheet music, which meant ASCAP members would make more money.

Eventually the stations agreed to pay royalties to ASCAP through a *blanket licensing agreement*, which meant the stations paid ASCAP an annual \$250 fee. In exchange, the stations could use all ASCAP-licensed music on the air. (ASCAP licenses its music to stations the same way today, but the annual fee, of course, is considerably higher.) Eventually another licensing organization, Broadcast Music Inc., or *BMI*, also would collect broadcast royalties.

## Commercial Sponsorship

Once station owners agreed to pay for their programs, they had to figure out where they would get the money. AT&T had the answer with an idea pioneered at its station WEAF in New York. WEAF started selling advertising time to sponsors. Its first sponsored program cost the advertiser \$100 to sponsor a 10-minute program.

The success of commercial sponsorship as a way to support radio settled the issue of who would pay the cost of airing the programs. Advertisers paid for programs through their advertising; the American public paid for the programs indirectly by supporting the advertisers who supported radio.

#### Federal Radio Commission

As more stations began to crowd the air, their signals interfered with one another. With only so many good radio frequencies available, the provisions of the Radio Act of 1912 began to seem inadequate. Congress passed the Radio Act of 1927, which formed the Federal Radio Commission under the jurisdiction of the Department of

**ASCAP** American Society of Composers, Authors and Publishers.

**Blanket Licensing Agreement** An arrangement whereby radio stations become authorized to use recorded music for broadcast by paying a fee.

**BMI** Broadcast Music Inc., a cooperative music licensing organization.

Commerce. The president appointed the commission's members, with Senate approval.

The shortage of air space required that broadcasting in the United States operate under a type of government regulation unknown to newspaper and magazine publishers. The federal government licensed the stations for three years, and the commission mandated that the stations operate "as a public convenience, interest or necessity requires."

The commission, created to protect the stations by allocating frequencies, also became the license holder. The stations could operate only with the government's approval, and the stations needed commission approval to be sold or transferred. The Radio Act of 1927, including the concept that broadcasters must operate in the "public convenience, interest or necessity," became the foundation for all broadcast regulation in the United States.

In 1934, Congress established the Federal Communications Commission (FCC) to regulate the expanding wireless medium, making the FCC a separate agency of government and no longer a part of the Department of Commerce. It is important to remember that the



Radio in the 1930s and 1940s became a powerful cultural and political force, offering people an inexpensive source of news and entertainment. In 1930, the new magazine Radio News featured "1001 Radio Questions and Answers."

commission's original purpose was to allocate the broadcast spectrum so station broadcast signals would not interfere with one another. The FCC was not originally envisioned to oversee broadcast content.

The FCC began work on July 11, 1934, composed of seven commissioners appointed by the president and approved by the Senate. This same basic structure and purpose govern the commission's actions today, but now there are only five commissioners. The establishment of the FCC in 1934 also set the precedent for the later regulation of television.

## Radio Grows into a Powerful Force

Most radio stations mixed entertainment, culture and public service, and together they created a new kind of collective national experience. In the 1930s and 1940s, radio became a powerful cultural and political force and gave millions of people a new, inexpensive source of information and entertainment (see Illustration 6.1, "Where Do People Listen to the Radio?," p. 110).

The commercialization of American broadcasting also gave advertisers access to this audience at home. Radio's massive group of listeners sat enraptured with sponsored programming of many types: comedy, music, serials, sports, drama and news. Eventually, all these types of programming migrated to television.

## "The War of the Worlds" Challenges Radio's Credibility

On Halloween Eve, October 30, 1938, the Mercury Theatre on the Air broadcast a play based on the H. G. Wells novel The War of the Worlds. The live 8 p.m. broadcast played opposite the very popular Edgar Bergen program on NBC, and the Mercury Theatre broadcast rarely had even 4 percent of the audience. Very few people heard the announcement at the beginning of the program that the *Mercury Theatre* was performing a version of the Wells story.

The program began with the announcer introducing some band music. A second voice then said, "Ladies and gentlemen, we interrupt our program of dance music to bring you a special bulletin. At 20 minutes before 8 o'clock Central Time, Professor Farrell of Mount Jennings Observatory, Chicago, reports observing several explosions of incandescent gas occurring at regular intervals on the planet Mars."

FCC Federal Communications Commission.

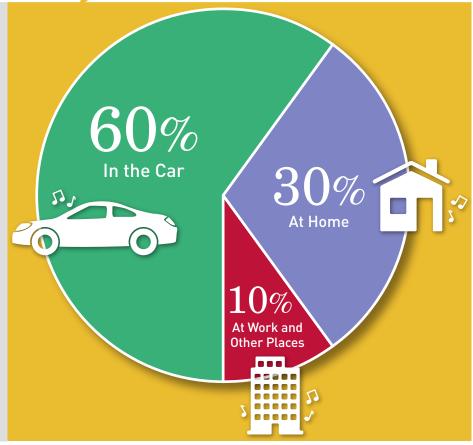
## **IMPACT**

Society

#### **ILLUSTRATION 6.1**

## Where Do People Listen to the Radio?

Adults tune in to the radio more at work and in the car than they do at home. Advertisers, such as car dealers, use this demographic information to help target radio audiences with their messages.



Radio Advertising Bureau, rab.com.



The fear created by Orson Welles' "The War of the Worlds" broadcast in 1938 demonstrated how easily unsubstantiated information could be misinterpreted on the radio. Orson Welles (center, in the light-colored suit) met with reporters on October 31, 1938, to answer questions about the broadcast.

More dance music followed and then more bulletins about a meteor, with the startling news that 1,500 people near Princeton, New Jersey, had died when the meteor hit the town. Then the announcer said it was not a meteor but a spaceship carrying Martians armed with death rays.

Two professors from the Princeton geology department actually set out to locate the "meteors." In Newark, New Jersey, more than 20 families rushed out of their homes, covering their faces with wet handkerchiefs to protect them from the "gas." After a burst of horrified calls, CBS began repeating the announcement that the program was just a radio drama, but the damage had been done.

The episode demonstrated how easily alarming information could be innocently misinterpreted, especially because the listeners had no other source than radio to check the reliability of what they were hearing. Radio listeners truly were a captive audience.

## Radio Networks Expand

The formation of radio networks as a source of programming and revenue is a crucial development in the history of American radio. A network is a collection of stations (radio or television) that offers programs, usually simultaneously, throughout the country, during designated times.

As the radio networks stretched across the U.S. they provided a dependable source of programming. Most stations found it easier to affiliate with a network and receive and distribute network programming than to develop local programs.

## David Sarnoff Launches NBC

NBC grew out of the government's original agreement with RCA. RCA, GE and Westinghouse formed the National Broadcasting Company in 1926. By January 1927, NBC, headed by David Sarnoff, had formed two networks: the Red network (fed from WEAF in New York) and the Blue network (originating from station WJZ in Newark).

Station engineers drew the planned hookups of the two networks with red and blue colored pencils, which is how the networks got their names. RCA faced criticism about its broad control over the airwaves because it continued to be the world's largest distributor of radios, which were made by Westinghouse and General Electric.

## William S. Paley Starts CBS

Twenty-six-year-old William S. Paley, heir to a tobacco fortune, bought the financially struggling Columbia Phonograph Company in 1929. He changed the name to Columbia Broadcasting System, and put his CBS network on the air with 25 stations. Programming originated from WABC in New York. Paley became the nemesis of NBC, then controlled by David Sarnoff, and this early competition between Sarnoff and Paley shaped the development of American broadcasting.

## **Edward Noble Buys ABC**

In 1941, the FCC ordered RCA to divest itself of one of its networks. In 1943. RCA sold NBC-Blue to Edward J. Noble (who had made his fortune as head of the





David Sarnoff (left), who began his broadcast career as a wireless operator, eventually became president of RCA. William S. Paley (right), who launched CBS radio, often battled with Sarnoff. The continuing competition between Sarnoff and Paley shaped the early development of American radio and TV broadcasting.

> company that produced LifeSavers candy). Noble paid \$8 million for the network that became the American Broadcasting Company (ABC), giving the country a three-network radio system (which later became the basis for the nation's three-network TV system).

## Radio Adapts to Television

Radio networks prospered from the 1940s to the 1980s, when NBC sold its radio network, and CBS and ABC devoted more attention to their TV holdings. When television initially was launched in the 1940s, it seemed it would cause the death of radio. As soon as television proved itself, advertisers abandoned radio, said comedian Fred Allen, "like the bones at a barbecue."

The entertainers fled to television, too—original radio talents such as Bob Hope, Milton Berle and Jackie Gleason soon dropped their radio programs and moved to TV. Public affairs programs like *Meet the Press* made the move from radio to TV, as did Edward R. Murrow's radio news program, Hear It Now, which on television became See It Now.

**Network** A collection of radio or TV stations that offers programs, usually simultaneously, throughout the country during designated program times.

Five developments in the 1940s, 1950s and 1960s transformed the medium of radio as well as guaranteed radio's survival alongside television:

- 1. The FM radio frequency was accepted by the public.
- 2. Disc jockeys hosted music shows.
- 3. People started using clock, car and transistor radios.
- 4. Radio formats streamlined broadcasts.
- **5.** The payola scandals focused on broadcast ethics.

## Inventor Edwin H. Armstrong Pioneers FM

After working for more than a decade to eliminate static from radio broadcasts, engineer Edwin H. Armstrong applied to the FCC in 1936 to broadcast using his new technique, frequency modulation (FM). Because of the way FM signals travel through the air, FM offered truer transmission than AM (amplitude modulation) with much less static. Armstrong faced difficult opposition from David Sarnoff at RCA, who originally had been an Armstrong sponsor.

The FCC received 150 applications for FM licenses in 1939 but then froze licensing during World War II. After the war, Armstrong again faced Sarnoff, but this time Armstrong lost. RCA was using Armstrong's frequency modulation in its TV and FM sets but refused to pay Armstrong royalties, so Armstrong sued RCA.

RCA fought Armstrong for 20 years, saying that RCA had been among the early developers of FM and citing RCA's sponsorship of Armstrong's initial experiments. In 1953, Armstrong became ill and suffered a stroke, then committed suicide. RCA quickly settled the suit with Armstrong's widow for \$1 million. Eventually FM became the spectrum of choice for music lovers, far surpassing the broadcast quality of AM.

## Licensed Recordings Launch Disc Jockeys

Early radio station owners avoided playing records because they would have had to pay ASCAP royalties. The FCC also required stations that played records to remind their audiences every half hour that the audience was listening to recorded music, not a live orchestra. This discouraged record spinning.

In 1935, newscaster Martin Block at New York's independent station WNEW began playing records in between his newscasts, and then he started a program called *Make Believe Ballroom*. He is generally considered America's first disc jockey. In 1940, the FCC ruled that once stations bought a record, they could play it on the air whenever they liked, without the announcements every half hour.



Edwin H. Armstrong's invention of FM made radio signals clearer. For nearly 20 years, Armstrong battled RCA's David Sarnoff for royalties for his invention. Disheartened by the legal battle, Armstrong committed suicide, but his widow eventually won the royalty payments. In 1923, Armstrong shows off one of his inventions—a very bulky portable radio in a suitcase—on the beach.

To counteract ASCAP's insistence on royalties, broadcasters formed a cooperative music-licensing organization called Broadcast Music Inc. Most rhythm and blues, country and rock 'n' roll artists eventually signed with BMI, which charged stations less for recording artists than ASCAP did. This inexpensive source of music also created a new type of media personality—the disc jockey.

## Clock, Car and Transistor Radios Make Radio a Necessary Accessory

Clock and car radios helped ensure radio's survival by making it an everyday accessory. Transistor radios, first sold in 1948 for \$40, were more reliable and cheaper than tube radios. Clock radios, introduced in the 1950s, woke people up and caused them to rely on radio for the first news of the day.

William Lear, who also designed the Lear jet, invented the car radio in 1928. Early car radios were enormous,





Drivers have always been an important radio audience. William Lear invented the first car radio in 1928. By 1945, 9 million cars in the United States had radios. Shown here are (top) a 1941 Cadillac dashboard with a luxury push-button radio and (bottom) a 2015 Tesla dashboard, which connects through a touchscreen tablet.

with spotty reception, but the technology that was developed during World War II helped refine them.

In 1946, 9 million cars had car radios. By 1963, the number was 50 million. A radio station owner coined the term drive-time audiences to describe people who listened in their cars on the way to work from 6 to 9 a.m. and on the way home from 4 to 7 p.m. (Today 99 percent of America's cars have radios.)

## Gordon McLendon Introduces Format Radio

How would the stations know which mix of records to use and who would play them? The answer came from Gordon McLendon, the father of format radio. At KLIF in Dallas, McLendon combined music and news in a predictable rotation of 20-minute segments, and eventually KLIF grew very popular. Next he refined the music by creating the Top-40 format.

Top 40 played the top-selling hits continually, interrupted only by a disc jockey or a newscast. By 1959, McLendon launched the beautiful-music format at KABL in San Francisco. In 1964, he created a 24-hour news format for Chicago's WNUS, using three news vans with "telesigns" that showed news on the roofs in lights as the vans drove around town.

Formats meant stations could share standardized programs instead of producing programs individually. Eventually, formatted programming spread, which made network programming and the networks themselves less important to individual stations.

## Payola Scandals Highlight **Broadcast Ethics**

The rise of rock 'n' roll coincided with the development of transistor and portable radios, which meant radio played a central role in the rock revolution. "Rock and radio were made for each other. The relationship between record companies and radio stations became mutually beneficial. By providing the latest hits, record companies kept stations' operating costs low. The stations, in turn, provided the record companies with the equivalent of free advertising," wrote radio historian David MacFarland.

Eventually this relationship proved too close. On February 8, 1960, Congress began hearings into charges that disc jockeys and program directors had accepted cash to play

specific recordings on the air. To describe this practice, the term **payola** was coined from the combination of pay and Victrola (the name of a popular early record player).

In May 1960, the Manhattan grand jury charged eight men with commercial bribery for accepting more than \$100,000 in payoffs for playing records. The most

**Drive-Time Audiences** People who listen to the radio in their cars during 6 to 9 a.m. and 4 to 7 p.m.

Payola The practice of accepting payment to play specific recordings on the air.

prominent among them was Alan Freed, who had worked in Cleveland (where he was credited with coining the term *rock 'n' roll*) and at New York's WABC.

In February 1962, Freed pleaded guilty to 2 counts of accepting payoffs, paid a \$300 fine and received 6 months of probation. Then he was found guilty of income tax evasion. He died in 1965 while awaiting trial, at age 43. In September 1960, Congress amended the Federal Communications Act to prohibit the payment of cash or gifts in exchange for airplay; nevertheless, the issue of payola surfaced again in 2005 and resulted in stiff fines in 2007.

## Radio at Work

A Columbia University report, commissioned by NBC in 1954, defined radio's role after television. "Radio was the one medium that could accompany almost every type of activity. . . . Where radio once had been a leisure-time 'reward' after a day's work, television was now occupying that role. Radio had come to be viewed less as a treat than as a kind of 'companion' to some other activity." Like magazines, radio survived in part because the medium adapted to fill different needs for its audience.

Today, about 10,800 broadcast radio stations are on the air in the United States, evenly divided between FM and AM. Network programming plays a much smaller role than when radio began because most stations play just music and don't need network programming to survive. National Public Radio is the only major public network. Many commercial stations today use *program* 

services, which provide satellite as well as formatted programming.

Most stations are part of a *group*, which means that a company owns more than one station in more than one broadcast market. Some stations are part of a combination AM/FM (*a combo*), which means that a company owns both AM and FM stations in the same market. A few stations remain family-owned, single operations that run just like any other small business.

The management structure at a radio station usually includes a general manager, a program manager, account executives, the traffic department, production department, engineering department and administration.

The *general manager* runs the radio station. The *program manager* oversees what goes on the air, including the news programs, the station's format and any on-air people. Salespeople, who are called *account executives*, sell the advertising for programs.

The *traffic department* schedules the commercials, makes sure they run correctly and bills the clients. The *production department* helps with local programming, if there is any, and produces local commercials for the station. *Engineering* keeps the station on the air. *Administration* pays the bills, answers the phones and orders the paper clips. A small station requires five employees, or fewer, to handle all these jobs.

## Congress Creates National Public Radio

The Public Broadcasting Act of 1967 created the Corporation for Public Broadcasting and included funding

for public radio and TV stations. National Public Radio launched a national program on FM in 1970, but many radios still didn't have an FM dial. Most public stations—owned by colleges and universities and staffed by volunteers—were staffed irregularly.

Then NPR started the program *All Things Considered* for the evening drive-time and in 1979 launched *Morning Edition*. Today, *Morning Edition* and *All Things Considered* have a very loyal audience for their long interviews on topical issues and international reports. By design, public radio is an alternative to commercial radio. Today, NPR still receives some public funding, but it depends primarily on private donations to survive.



We've got 9 seconds. Explain your life's research on the business cycle and how it applies to the current economy.

## Portability and Immediacy Help Radio Survive

Instead of dying after the spread of television, radio managed to thrive by adapting to an audience that sought the portability and immediacy that radio offers. Nothing can beat radio for quick news bulletins or the latest hits. Radio also delivers a targeted audience much better than television because the radio station you prefer defines you to an advertiser much better than the television station you watch.

In the 1990s, the advertising potential for an intimate medium like radio attracted entrepreneurs who had never owned a station and group owners who wanted to expand their holdings. When you listen to the radio in your car or through earphones while you jog, for instance, radio is not competing with any other medium for your attention. Advertisers like this exclusive access to an audience. Three important issues for people in broadcast radio today are

- 1. Deregulation
- 2. Ratings
- 3. Formats

## Telecommunications Act of 1996 Overhauls Radio

The Telecommunications Act of 1996 was the first major overhaul of broadcast regulation since the Federal Communications Commission was established in 1934. Today the legacy of the act is that commercial radio is regulated much less than it was in the 1970s. This is called a government policy of *deregulation*.

Before the 1996 act passed, the FCC limited the number of radio stations that one company could own nationwide. The Telecommunications Act removed these limits, and in each local market the number of stations that one owner can hold depends on the size of the market. (For a complete discussion of the Telecommunications Act, see Chapter 14.)

The Telecommunications Act also allows crossownership, which means that companies can own radio and TV stations in the same market and broadcast and cable outlets in the same market. As soon as the act passed in February 1996, radio station sales began to soar.

Today several radio corporations each own hundreds of broadcast stations. Supporters of the changes say this makes broadcast radio more competitive because these larger companies can give the stations better financial



Live sports and sports talk remain popular radio formats. In May 2013, Heather Cox of ESPN interviewed basketball player Kevin Love about being drafted by the Minnesota Timberwolves. Love now plays for the Cleveland Cavaliers.

support than small, single owners. Opponents point out that consolidation in the radio industry leads to less program variety for consumers and too much power for companies that own large numbers of radio stations nationwide.

## Are Radio Ratings Accurate?

Radio station owners depend on ratings to set advertising rates, and the stations with the most listeners command the highest ad rates. Originally, a company called Arbitron gathered ratings for the radio business. To find out what radio stations people were listening to, Arbitron requested that selected listeners complete and return diaries the company sent them.

Arbitron often was criticized because minorities, non-English-speaking listeners and people ages 18 to 24 didn't return the diaries in the same proportion as other people that Arbitron surveyed. The critics contended that Arbitron's ratings hurt rock and urban formats, such as rap/hip-hop and Spanish-language programming, while aiding the contemporary and news/talk/information formats, whose audiences are older and more responsive to the diaries. Arbitron acknowledged the problems and tried filling out diaries for people over the phone and adding bilingual interviewers.

**Deregulation** Government action that reduces restrictions on the business operations of an industry.

**Cross-Ownership** The practice of one company owning radio and TV stations in the same broadcast market.

Still, questions persisted. In November 2008, the Nielsen Company, which provides ratings for TV, launched a radio ratings service in direct competition with Arbitron. Then in 2012, Nielsen bought Arbitron, eliminating its competitor. This made Nielsen the only company in the United States that provides ratings information for radio.

# Radio Depends on Ready-Made Formats

Today's broadcast radio station owners, looking for an audience, can use one of several ready-made formats. By adjusting their formats, radio managers test the markets

until they find a formula that works to deliver their target audience to advertisers. (See **Illustration 6.2**, "Which Radio Formats Are Most Popular?" below.)

If you were a radio station manager today, and you wanted to program your station, you could choose from several popular formats.

**COUNTRY.** The Grand Ole Opry first broadcast country music on WSM in Nashville in 1925. This radio format is aimed at 25- to 45-year-olds in urban as well as rural areas.

**NEWS/TALK/INFORMATION/SPORTS.** A station with this format devotes most of its airtime to different types of talk shows, which can include call-in features,

#### IMPAC Money 32% Other\* 15% 12%8% Country News/ Pop Talk Contemporary 7%Adult Contemporary 6% 5% 5% Classic Classic Hits Hot Adult Rock Contemporary 4% Urban Adult Contemporary 3% 3% Rhythmic Sports Contemporary **Navigation** Phone \* Includes Contemporary Christian, Spanish Contemporary, Adult Hits, 80's Hits, Alternative, All News, Classical and Oldies. **ILLUSTRATION 6.2** truck dealers might choose a The most popular radio formats are country, news/talk, country station, for example. Which Radio Formats Are contemporary, classic hits and Most Popular? sports. Radio station owners use pre-packaged formats to attract a Radio Advertising Bureau Format Analysis, rab. specific audience for advertiserscom. 2014.

where listeners question on-the-air guests. Its typical audience is 35 years old and older. It is difficult for a small radio station to survive on news alone, so most of these stations are in big cities because of the continuing source of news stories. The news/talk category also includes live sports broadcasts, which are very popular because radio is a convenient way to follow live sports.

**SPANISH.** In the 1990s, Spanish-language stations were the fastest-growing radio format in urban areas, as radio owners targeted the nation's expanding Latino population, but the number of Spanish-language formats recently stabilized. Spanish-language radio usually features news, music and talk. Many Spanish-language stations are AM stations that recently have been converted from lessprofitable formats.

ADULT CONTEMPORARY. This program format includes adult rock and light rock music from the 1970s to today and aims to reach 25- to 40-year-olds in all types of markets.

CONTEMPORARY HITS/TOP 40. Playing songs on Billboard's current hits list, a Top-40 station closely follows trends among listeners, especially teenagers.

The most popular radio formats are country music, news/talk and pop contemporary music. However, although news/talk radio is very popular in Los Angeles, the most-listened-to radio station in the L.A. area is a Spanish-language station. Its popularity in an area with an expanding Latino population shows how cultural changes in urban areas can affect the economics of local radio.

Stations also can divide traditional formats into subcategories: Adult Contemporary has split further into classic rock and classic hits; some Spanish-language stations play only love songs. The use of prepackaged program formats means that a station can specialize its programming simply by what it chooses to play.

Most stations operate without any disc jockeys or limit personality programming to morning and evening drivetime. At these stations, engineers and announcers carry the programming. Today, radio networks, which once dominated radio programming, mainly exist to provide national news to their affiliates.

Station managers can program their own stations, mixing local news, music and announcements. Stations also can get programming from satellite program services. Satellites make program distribution easier, and satellite networks provide original, up-to-date programming without a large local staff.

## Audience Divides into Smaller Segments

Another significant trend in radio is the move toward more segmentation of the audience, similar to the

targeting of audiences in the magazine industry. Identifying a specific audience segment and programming for it is called *narrowcasting*.

"With narrowcasting, advertising efficiency goes way up as overall costs go down. . . . We are approaching the unstated goal of all radio programmers: to create a station aimed so perfectly that the listener will no longer have to wait, ever, for the song that he wants to hear," says radio historian Eric Zorn.

## Competition Revives Payola

As radio technology grows more complex and companies test new formats and different program delivery systems, the competition for your ear expands the choices that advertisers can make to reach you. However, as the competition among stations intensifies, some stations look for profits from a familiar but unethical source.

In 2005, New York's Attorney General Eliot Spitzer announced he was investigating the four major music companies to examine their practice of paying independent promoters to influence which songs the stations played on the air. The practice often was criticized as a way for stations to get around laws prohibiting payola that date from the 1960s. Some record labels paid individual stations as much as \$100,000 to help promote their songs, Spitzer said. Other companies gave the stations luxury travel for station employees or gifts to use in station giveaways.

"To disguise a payoff to a radio programmer at KHTS in San Diego, Epic Records called a flat-screen television a 'contest giveaway,'" reported The New York Times. "Epic . . . used the same gambit in delivering a laptop computer to the program director of WRHT in Greenville, N.C.—who also received PlayStation 2 games and an out-of-town trip with his girlfriend."

After more payoffs like these were uncovered, Sony agreed to a \$10 million settlement and fired the top promotion executive at its Epic label. Radio executives at some of the other corporations said they already had stopped paying independent promoters, but the attorney general said, "This is not a pretty picture; what we see is that payola is pervasive." In 2007, the stations agreed to pay an additional \$12.5 million to the Federal Communications Commission to settle the complaints.

Narrowcasting Segmenting the radio audience.

## Digital Audio Delivers Internet and Satellite Radio

A recent technology known as *digital audio broadcast* (DAB) eliminates all the static and hiss of current broadcast signals and means infinite program choices for consumers as all digital radio signals share the same delivery system. Today digital stations send their digital signals over the Internet as well as over the air.

**SATELLITE RADIO.** Today *satellite radio* offers more than 140 channels of varied music and talk, with limited advertising on some stations and no advertising on others. For a subscription fee, two companies—Sirius Satellite Radio (based in New York) and XM (based in Washington)—began offering the service in 2001.

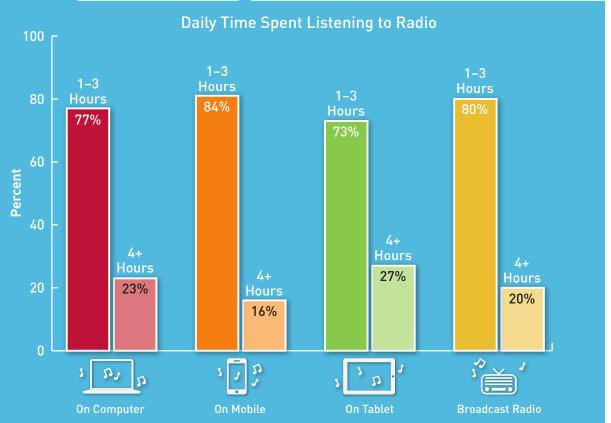
Satellite radio service required a special satellite radio receiver. In 2002, General Motors began offering satellite radios as a factory-installed option on some models. Ford and Daimler-Chrysler began offering the feature in 2003. New-car buyers bundled the subscription fee with their automobile financing.

**Digital Audio Broadcast** A new form of audio transmission that eliminates all static and makes more program choices possible.

**Satellite Radio** Radio transmission by satellite, with or without advertising, available by subscription.

## IMPACT

## Convergence



#### **ILLUSTRATION 6.3**

## Radio Listening Goes Digital and Mobile

A radio station's audience originally was limited to the reach of the station's broadcast tower. Today Internet radio means a station's reach is global, so that a station in California can reach a listener in New York, for example, or Paris. And streaming radio, such as Pandora and iHeartRadio, now is available across all digital

devices. According to industry estimates, regular radio listeners access radio through a variety of delivery systems.

"Digital Audio Usage Trends: A Highly Engaged Listenership," Internet Advertising Bureau, Radio Advertising Bureau, Parks Associates White Paper, rab.com.

## IMPACT

# Convergence

## Pandora Radio Opens **Listener Data to Let Musicians Target Fans**

Bloomberg News

Pandora, the world's largest Internet radio service, is giving musicians free access to the data it stores about their biggest fans.

Pandora already uses the listener data for advertising purposes. It has helped political candidates decide where to advertise for the upcoming election.

Starting [on October 22, 2014], the more than 125,000 artists on Pandora will be able to view detailed information about their songs' popularity, breakdowns of the audience based on age and gender, and a map that shows where listeners are located. The data can be used to plan tours and set lists and better target fans, Pandora said in a blog post.

"We hope to make the day in and day out easier for artists by eliminating the guesswork," Pandora founder Tim Westergren wrote on the blog. "Our ultimate goal is to help artists across the spectrum build and maintain their careers."



In 2014, Pandora Internet Radio announced that the radio service will be interactive so artists can track their songs' popularity. By 2015, car manufacturers offered Pandora's streaming service in 30 percent of the nation's new cars.

Pandora, which has more than 76 million active users, has amassed a trove of information over the past nine years. It wants to use that data to improve its contentious relationship with the music industry, which has long sought more money from the Oakland, California-based company.

The company has reached agreements to license music from rights management groups BMG and Merlin, which collect fees on

behalf of artists. The company said in those deals it would share its data with musicians.

With the Artist Marketing Platform, musicians can log in and find out how many people are listening to their songs, how many people have created a new station based on a song and how many listeners they have in total.

The data can help artists decide where to stop on a tour, decide what songs to play and pick their next single, Mr. Westergren wrote.

"Pandora Opens Listener Data to Let Musicians Target Fans," Bloomberg News, October 22, 2014, adage.com.

By 2005, XM boasted 4 million subscribers, and in 2008, the Justice Department approved the merger of XM and Sirius, which became SiriusXM. Today, about 70 percent of the nation's cars are equipped to receive satellite radio.

INTERNET RADIO. The majority of U.S. radio stations today send their programming over the Internet. The Internet offers unlimited possibilities for radio to be distributed free beyond the bounds of a local radio audience, and people in the United States can easily hear

overseas stations, such as the BBC (British Broadcasting Corporation), as well as stations based in the United States but outside their local area. (See Illustration 6.3, Impact/Convergence: "Radio Listening Goes Digital and Mobile," p. 118.)

**BBC** British Broadcasting Corporation.



The streaming Internet radio service Pandora, launched in 2005, allows users to select the programs and music they want to hear, free and by subscription. In 2015, Pandora moved into cars and is now available in 30 percent of new cars sold in the U.S.

Other streaming services, such as Rhapsody and Spotify, have followed, and in 2013 Apple launched iTunes Radio. iHeart Radio also delivers programming from the group of broadcast stations owned by iHeart Radio Inc. (formerly Clear Channel) on the Internet, which gives listeners access to live local radio broadcast programming, including commercials and announcers. Each service has a different revenue model. Some are available free and supported by advertising; others require subscriptions.

## Streaming Splits Radio Industry Income

The more stations and digital radio services (such as satellite and Internet radio) that are available for customers, the harder every station and delivery service must compete for advertising. This means less revenue for each station because each station's potential audience becomes smaller.

Streaming Internet radio changes the entire revenue equation for the radio industry. Consumers can pay subscription fees to hear radio on satellite—some without commercials-and go to the Internet for access to new free channels they couldn't hear before, offering listenerspecific programming and interactivity. (See Impact/ Convergence, "Pandora Radio Opens Listener Data to Let Musicians Target Fans," p. 119.)

Meanwhile, broadcast radio is trying to stay afloat using the same commercial model that has served the industry for nearly 100 years. In 2005, commercial radio introduced the concept of **HD radio**, hybrid digital technology that improves sound quality and also makes it possible for radio stations to transmit real-time, text-based information services along with their programming. HD radio can display song titles and artists' names, weather, news and traffic alerts as a digital readout accompanying the audio programming.

Because there has been very little consumer demand, the conversion to HD has been slow. However, by contrast, in September 2014, Pandora Radio announced that its Internet streaming service is now available in 30 percent of all new cars being built.

In the 1930s, radio learned how to compete with newspapers. In the 1950s, radio learned how to compete with television. Beginning in 2000, satellite and then Internet radio challenged the supremacy of broadcast radio as an advertising medium.

Convergence means that broadcast, satellite and Internet radio are available to consumers simultaneously wherever they listen—outdoors or indoors, in the car, at home or at the office. The choices consumers make over the next ten years about how they want to receive radio programming ultimately will determine whether the competition for listeners will lead to expansion or contraction of the radio business.

HD Radio Hybrid digital technology that improves sound quality and makes it possible for radio stations to transmit real-time text messaging along with their programming.

# REVIEW, ANALYZE, INVESTIGATE

## CHAPTER 6

## Radio Sounds Are Everywhere

- Radio transformed national politics and expanded Americans' access to popular, as well as classical,
- · Radio is a commercial medium, supported almost entirely by advertising.

## Radio Takes a Technological Leap

- Radio history began with Samuel F. B. Morse's invention of the telegraph, first demonstrated in 1835.
- Alexander Graham Bell invented the telephone, demonstrated in 1876, and Heinrich Hertz first described radio waves in 1887.

## **Broadcasting Is Born**

- Guglielmo Marconi's promotion of wireless radio wave transmission began in 1899 with the America's Cup
- Reginald Fessenden advanced wireless technology, but Lee de Forest called himself the father of radio because he invented the Audion tube to detect radio waves.
- David Sarnoff and William S. Paley made radio broadcasting a viable business in the U.S.

#### Federal Government Regulates the Airwaves

- The federal government intervened to regulate broadcasting almost as soon as it was invented.
- Early regulation separated the broadcast media from the print media, which are not regulated directly by the federal government.

#### Radio Audience Expands Quickly

- Three important developments for commercial radio were blanket licensing, commercial sponsorship and the Radio Act of 1927.
- Blanket licensing meant that radio owners could use recorded music inexpensively.
- Commercial sponsorship established the practice of advertisers underwriting the cost of American broadcasting.
- The Radio Act of 1927 established the concept that the government would regulate broadcasting "as a public convenience, interest or necessity requires."

 The Radio Act of 1927 is the foundation for all broadcast regulation in the United States, including the establishment of the Federal Communications Commission (FCC) in 1934.

#### Radio Grows into a Powerful Force

- In the 1930s, radio programming expanded to include comedy, music, serials, drama and news.
- · Radio also indirectly created a collective national experience that had not existed before.
- Commercials gave advertisers access to an audience at home.

## "The War of the Worlds" Challenges Radio's Credibility

- On Halloween Eve, October 30, 1938, Mercury Theatre on the Air broadcast "The War of the Worlds," a fictional radio drama that sounded to some listeners like a legitimate newscast and featured Martians landing in New Jersey.
- The "War of the Worlds" broadcast demonstrated the vulnerability of a captive broadcast audience.

#### Radio Networks Expand

- Originally, the three radio networks (NBC, CBS and ABC) provided most radio programming. Today, most stations use a variety of sources to program themselves.
- David Sarnoff launched NBC radio in 1927, William S. Paley started CBS radio in 1929 and Edward Noble bought NBC-Blue, which became ABC, in 1941.

#### Radio Adapts to Television

- Edwin H. Armstrong is responsible for the invention of FM radio. Today, FM stations are three times as popular as AM stations.
- Disc jockeys hosted music shows.
- Clock, car and transistor radios expanded radio's audience, but the role of radio changed with the advent of TV, which meant radio had to compete with visual entertainment and TV news.
- Gordon McLendon launched format radio in 1959.
- In the 1960s, Congress uncovered the unethical practice of payola in the radio industry. Recording companies were paying station disc jockeys to play their songs on the air.

#### Radio at Work

- Radio is a portable medium that can accompany almost every activity.
- Today the 10,800 broadcast radio stations in the United States are about evenly divided between AM and FM.
- There is one major public network, NPR. Most commercial stations are part of a group or a combo and use program services instead of doing original programming.
- The management structure at a radio station includes a general manager; a program manager; account executives; the traffic, production and engineering departments; and administration.

## **Congress Creates National Public Radio**

- The federal government began funding National Public Radio in 1967, and NPR began broadcasting national programming in 1970.
- Today, NPR programs such as *Morning Edition* and *All Things Considered* still attract a very loyal audience, and public radio depends on private donations to survive.

## Portability and Immediacy Help Radio Survive

- Radio is the best medium for quick news bulletins and the latest hits.
- Because it is an intimate medium, radio delivers a targeted audience to advertisers much better than TV.
- Radio is also portable—you can listen to it in your car and take it with you anywhere.

## Telecommunications Act of 1996 Overhauls Radio

- The Telecommunications Act of 1996 was the first major overhaul of broadcast regulation since the FCC was established in 1934.
- The act removed the limit on the number of stations one company can own, and in each local market the number of stations one owner can hold depends on the size of the market.

#### Are Radio Ratings Accurate?

- Arbitron historically had been the primary ratings service for radio.
- Stations use ratings to set their rates for advertising.
- In November 2008, the Nielsen Company launched a radio ratings service in direct competition with Arbitron.

• In 2012, Nielsen bought Arbitron, leaving the broadcast industry with a single ratings service for radio and TV.

## Radio Depends on Ready-Made Formats

- Formats systematize radio broadcasts.
- Stations use formats to target a specific type of radio listener and define the audience for advertisers.
- The most popular radio formats are country music and news/talk/sports.

## **Audience Divides into Smaller Segments**

- A significant trend in radio today is the move toward more segmentation of the audience, similar to the division of audiences in the magazine industry.
- Identifying a specific audience segment and programming for it is called narrowcasting.

## **Competition Revives Payola**

- Payola resurfaced in 2005 when New York's attorney general charged that the four major recording companies paid private promoters to get their songs on the air.
- Sony paid \$10 million to settle the charges against it, and in 2007 the radio stations paid the FCC an additional \$12.5 million.

## Digital Audio Delivers Internet and Satellite Radio

- Digital audio broadcast, Internet radio and satellite radio mean more program choices for listeners.
- Today the majority of U.S. radio stations deliver programming over the Internet.
- Streaming Internet radio services, including Pandora, launched in 2005, and iHeart Radio offer radio programming free and by subscription.

#### Streaming Splits Radio Industry Income

- The addition of new sources for radio programming, such as satellite and Internet radio, are changing the economics of radio today.
- In 2005, commercial radio introduced the concept of HD radio, but there has been limited demand for it.
- Pandora announced in 2015 that 30 percent of all new cars were equipped to deliver Pandora Internet radio.

## **Key Terms**

These terms are defined in the margins throughout this chapter and appear in alphabetical order with definitions in the Glossary, which begins on page 361.

ASCAP 108 BBC 119 Blanket Licensing Agreement 108 BMI 108 Cross-Ownership 115 Deregulation 115 Digital Audio Broadcast 118 Drive-Time Audiences 113 FCC 109 HD Radio 120 Narrowcasting 117 Network 111 Payola 113 Satellite Radio 118

## **Critical Questions**

- **1.** How did the Radio Act of 1912 set a precedent for American broadcasting?
- 2. How did the following developments in radio affect the industry? Why is each of them so important?
  - a. Blanket licensing
  - **b.** Commercial sponsorship
  - c. Establishment of networks
  - **d.** Format radio

- **3.** Discuss the "War of the Worlds" broadcast and its effects upon its audience. How did it change people's perceptions of radio?
- **4.** Discuss the ethics issues involved in the payola scandals.
- 5. List and explain three challenges facing the radio business today. If you were an Internet entrepreneur today, would you invest in radio? Why?

## Working the Web

This list includes sites mentioned in the chapter and others to give you greater insight into the radio business.

#### The Broadcast Archive

oldradio.com

This is a site for radio historians, with an emphasis on radio technology. The site includes an archive of manuals and schematics, as well as historical narratives and biographies of people who worked in early broadcasting.

## **Canadian Broadcasting Corporation** (CBC) Radio-Canada

cbc.ca/radio

The radio division of Canada's national public broadcasting system, the CBC was created in 1936 in response to concern about the growing U.S. influence in radio. Now encompassing television and new media services, the CBC has a mandate to provide a wide range of programming that is predominantly and distinctively Canadian. The Web site provides live radio streams from CBC Radio One (news and talk) and Radio 2 (jazz, blues and classical music), as well as program schedules, podcasts and forums. It also has links to CBC Radio 3 (rock, pop, hip-hop, electronica and alt-country music) and Sirius XM.

#### **CBS Radio**

cbsradio.com

As one of the largest U.S. major-market radio operators, CBS provides broadcast, digital and on-demand radio. In addition to operating 130 radio stations, it is home to more than 2 dozen professional sports franchises.

## Friday Morning Quarterback (FMQB)

fmqb.com

Recently celebrating 40 years of serving the music and radio industries, FMQB is the self-proclaimed "premier destination for music and radio industry professionals." The production division is renowned for its one-hour National Radio Series that features major artists premiering new music. FMQB features breaking radio industry and music news, a voice talent vault, music available for airplay, ratings and job information and industry links.

#### **Inside Radio**

insideradio.com

This radio industry publication features industry news, ratings and classifieds. Inside Radio also publishes Who Owns What (a weekly update on station ownership), Radio Journal (featuring FCC updates and technical news) and The Radio Book (a directory of radio stations in the United States and Canada).

#### National Public Radio

npr.org

NPR distributes and produces noncommercial news, talk and entertainment programs. Its more than 860 independently operated local stations mix national and local programming to fit the needs of their communities. Audio archives are available for a growing number of nationally produced

#### Radio Advertising Bureau (RAB)

rab.com

The goal of the RAB, the promotional arm of the commercial radio industry, is to increase the use of radio advertising and develop the skills of radio marketing representatives.

#### Radio Lovers

radiolovers.com

Radiolovers.com offers hundreds of vintage radio shows online for free. Its goal is to bring the world of Old Time Radio to a new generation of listeners. Users can browse by show genre or search by title. The site includes a disclaimer stating that the creators believe all show copyrights have expired or never existed and that they will remove any recording that is shown to violate a copyright.

#### **SiriusXM**

#### siriusxm.com

SiriusXM offers 140 channels of satellite radio, including commercial-free music as well as sports, news and talk shows. Radios must be SiriusXM-ready to receive the SiriusXM signal, but the company also offers programming

to mobile devices such as cell phones and tablets through the Internet.

#### TuneIn

#### tunein.com

Tuneln allows users to listen to music, sports and news on over 70,000 radio stations around the world via its Web site. Listeners can access more than 2 million programs, including podcasts, concerts and interviews.



Impact/Action Videos are concise news features on various topics created exclusively for Media/Impact. Find them in Media/Impact's MindTap at cengagebrain.com.

# MindTap Log on to MindTap for Media/Impact to

access a variety of additional material—including learning objectives, chapter readings with high-lighting and note-taking, **Impact/Action Videos**, activities, and comprehension quizzes—that will guide you through this chapter.

# MOVIES DIGITIZING DREAMS



Although many American movies today are produced overseas, visitors still flock to Hollywood to be near their favorite stars—even if it's just to stand on a cement star in the sidewalk showcasing the star's name.