

The History of the Twentieth Century

Episode 237

“The Phone Booth of the Air”

Transcript

[music: Fanfare]

In 1916, David Sarnoff had outlined his proposal for a “radio music box” that would receive news and entertainment delivered by radio and bring it into every living room and parlor in America.

The idea was dismissed as “harebrained” at the time, but by 1920, after Westinghouse had demonstrated how popular radio could be, Sarnoff was suddenly the man of the hour.

Welcome to *The History of the Twentieth Century*.

[music: Opening Theme]

Episode 237. The Phone Booth of the Air.

We pick up today where we left off last week. In 1916, David Sarnoff had written a memorandum for his employers at Marconi Wireless explaining his concept of the “radio music box.” Few took it seriously at the time. Then America went to war, and the radio business went with it.

After the Armistice in 1919, the US Navy began cajoling the American subsidiary of Marconi Wireless and a few American electronics firms that held useful patents to pool those patents and create a new American corporation to exploit the potential of radio. This corporation was named the Radio Corporation of America, known universally as RCA.

In early 1920, while the creation of RCA was still being negotiated, David Sarnoff met with Owen Young, the general manager of General Electric. Remember that at this time, most people still saw radio as primarily a medium for two-way communication. As in, a wireless telegraph or wireless telephone. Sarnoff pitched the idea of a radio receiver as a new home entertainment product, like a piano or a phonograph, one that could bring in music, news, and other entertainment into every home. In particular, he noted, people living in rural or isolated locations could listen live to concerts and lectures from the big city.

Sarnoff believed that a practical consumer radio could be designed and manufactured to sell at a retail price of \$75. That's equivalent to about US\$1000 in our time, although substantially less than the radios that were on the market then. He projected that in the first year, RCA could sell 100,000 units at that price, and then 300,000 in the second year and 600,000 in the third, for a total of one million radios in just three years. The profit potential was tremendous. And even after the units were sold, radio listeners would remain a valuable market. Sarnoff pointed to *Wireless Age*, a magazine that had been published by Marconi Wireless, due to be taken over by RCA. *Wireless Age* could be used to publish schedules of concerts, lectures, and other radio-friendly events in cities across the United States, along with information on which radio stations would be carrying each event at what times, making the magazine an indispensable companion for anyone who owned a radio. With millions of subscribers, the magazine could charge premium advertising rates and would itself become a profit center for RCA. Sarnoff cited the movie magazines that were all the rage at the time as a model for what *Wireless Age* could become.

Unlike the reception Sarnoff had gotten in 1916, by 1920, the management at GE were more than ready to start taking him seriously. His arguments were convincing and his figures attractive. But in 1920, the management at GE and Westinghouse and Western Electric and Marconi Wireless were still hashing out the details of the RCA merger. Who was going to contribute what, and how big a stake each of them was going to get in the new company. They weren't ready for Sarnoff's idea just yet, so they gave him a budget of \$2,000 and assigned him the job of designing a prototype for his radio music box.

It would be another year before the Radio Corporation of America finally opened for business. But it was an eventful year in the field of radio, as we saw last week. Westinghouse Electric would own 20% of the new corporation, but they weren't satisfied with that and had begun experimenting with radio broadcasting on their own with their transmitting station KDKA in Pittsburgh. KDKA became a huge sensation, as well as a convincing demonstration that Sarnoff had been right all along. Put interesting things into your broadcast, and the demand for radio receivers would go off the charts.

By spring of 1921, while everyone was talking about Westinghouse and KDKA, the RCA deal was finally coming together. In the two years it had taken to negotiate the deal, the mission of the new company had completely changed. RCA was no longer meant to be a wireless communication company. It was going into the business of selling radio receivers directly to consumers. And who better to lead the new company into these uncharted waters than David Sarnoff, who, having just turned thirty years old, was made general manager of RCA.

RCA set to work at once manufacturing radio receivers, but Sarnoff judged that wasn't enough. The company had to make a splash in the broadcasting realm, just as Westinghouse had with last year's Presidential election returns. RCA needed to broadcast something on the same scale. A similar event that would attract nationwide interest...

William Harrison Dempsey was born on June 24, 1895 in Manassa, Colorado, to a family that was part Irish and part Cherokee. The family, including young William, converted to Mormonism. They were poor and moved frequently during his childhood. William had to leave school at an early age and work to help support the family. He left home at the age of sixteen and worked at odd jobs. He soon discovered he could supplement his income by challenging other young men to impromptu boxing matches. In the autumn of 1914, at the age of 19, Dempsey fought in his first real prize fight, after his older brother backed out. He fought this match under the name Jack Dempsey, because that had been the name of a celebrated Irish-American middleweight champion of the 1880s.

Dempsey won that bout, and most matches thereafter. On July 4, 1919, Dempsey was given a shot at the world heavyweight championship against Jess Willard, the defending champion who had won the title after defeating Jack Johnson in 1915, episode 104. Dempsey won that fight in three rounds and claimed the championship. He spent the next year touring the country, doing public appearances and exhibitions. He defended his title twice in 1920, both times knocking out his challengers in under two minutes. He became a celebrity athlete and a household name in the America of the Roaring Twenties.

In 1921, Dempsey was challenged for the title by the European heavyweight champion, French boxer Georges Carpentier. Besides being a boxing champion, Carpentier had served as a pilot in the French Air Force during the war and had won the *Médaille Militaire*. As a result, Carpentier had a significant following on both sides of the Atlantic. Jack Dempsey, by contrast, had not served in the US military during the war, ostensibly for medical reasons, although the fact that he became the world champion of boxing just months after the war ended led some to accuse Dempsey of dodging the draft, or “slacking,” as they said in those days. This was not a good look, especially next to Carpentier, a real, live war hero. Carpentier had many admirers even in the United States, so the match-up between the two of them was eagerly anticipated by anyone with even a casual interest in boxing. It was billed as the “Battle of the Century.” Yeah, another one, and we’re only up to 1921.

Carpentier would meet Dempsey in a match in Jersey City, New Jersey on July 2, 1921, and the reason I’m telling you all this is that this highly anticipated Dempsey-Carpentier boxing match struck David Sarnoff as just the sort of event he needed to make a splash for RCA. It would draw as much public interest as a Presidential election. Maybe more.

Sarnoff was able to borrow a GE-manufactured radio transmitter that had been meant for the Navy but was now war surplus and secured a license for a radio station WJY, RCA’s first station, which would only be on the air for a couple of hours. J. Andrew White, the editor of *Wireless Age*, a dapper man who favored pince-nez glasses strung on a black ribbon, organized the broadcast from inside a Pullman shed on the Lackawanna Railroad line about two miles from the arena. The transmitter antenna was a wire strung between two railroad towers.

A team of amateur radio operators organized by J. Owen Smith was recruited to set up receiving stations inside theatres up and down the East Coast, where patrons could pay a quarter and up to sit inside and listen to the match. Proceeds from these ticket sales were earmarked for French war relief, which was a worthy cause, but of course every patron in every seat in every one of those theatres was also getting a firsthand demonstration of the wonders of radio. Imagine having one of these gadgets in your very own home!

How do you describe a boxing match as it happens? This was something new, but it turns out Andrew White had done some amateur boxing in his younger days. He practiced by boxing in front of a mirror and describing his own moves as he went.

When the big day came, White was at ringside, following the match and describing each punch into a telephone line. At the other end of the line, sweltering in the summer heat inside that tin shed, Owen Smith listened to White over the telephone, then repeated his words into the radio microphone.

Jack Dempsey scored a knockout in the fourth round and would continue to hold the title of world heavyweight champion. And it was fortunate the match was no longer than that, because the overpowered, overheated radio transmitter began blowing its tubes shortly afterward, abruptly ending the broadcast. But it was good enough. David Sarnoff had also scored a knockout. The Dempsey-Carpentier match was the first major sporting event broadcast over the radio and more than 300,000 people listened to it as it happened. *That* was a splash, for RCA, for Sarnoff, and also for Andrew White, who became a celebrity and would go on to make a career out of announcing sporting events, like the 1921 World Series that fall. He was called the most famous announcer on radio, and we can think of him as the world's first sports announcer.

[music: Fox, silent film music]

After the boxing match, the transmitter was repaired and installed at the General Electric factory in Roselle Park, New Jersey, where it resumed broadcasting with new call letters, WDY. By this time, Westinghouse had built its own transmitting station in Newark, designated WJZ. This was more of a problem than you might think, because at this time, the US Department of Commerce, which regulated the broadcast spectrum, had limited commercial radio transmitters to one specific frequency, 833 kHz, to be exact. Other frequencies were reserved for other uses.

WDY and WJZ solved this problem by negotiating an agreement under which they would broadcast on alternate days. At this time, radio stations were struggling to find material to put on the air anyway, and the transmitters were unreliable, high-maintenance beasts, so that was an arrangement everyone could live with. For a while. But we see here two of the problems early radio faced: sharing the airwaves and finding material to broadcast. Looming in the future is a third problem: who is going to pay for all this new technology? We will examine these three problems one at a time.

First, sharing the airwaves. Putting all the commercial broadcasters onto the same frequency was a problem from the beginning. These radio stations were powerful enough that listeners hundreds of miles away could tune in, and many did. Early radio hobbyists tried to find and listen to as many radio stations as they could, collecting them in the way birdwatchers collect sightings of different birds. But if you lived in, say, Pittsburgh, your chances of listening to broadcasts from New York City were greatly diminished by the close proximity of KDKA, which would likely drown out the more distant station. From the beginning, some commercial broadcasters tried cheating a little, by adjusting their frequency just a smidgen, until it was different enough that a radio listener might be able to pick it out from the other stations. In other communities, radio stations instituted so-called “Silent Nights,” when the station would go off the air for a certain designated time, giving local radio owners the opportunity to listen to a station in another city.

But these workarounds wouldn't be enough when the deluge came. In the year 1921, the Department of Commerce issued 28 commercial broadcasting licenses. In the first two months of 1922, they issued 32. In March, 77. By the end of 1922, there were almost 700 licensed radio stations in the United States. The Department ran out of three-letter combinations back in the spring, and had begun issuing four-letter call signs to new applicants.

Most of these stations had already been licensed as amateur stations; now they wanted to get in on the radio craze and filed to upgrade to commercial licenses. These included colleges and universities. North Carolina State College of Agriculture and Engineering started WLAC in October 1922, and recruited a prominent figure to help dedicate the station, someone we've met before, former Secretary of the Navy Josephus Daniels, the guy who banned booze on US Navy ships (episode 107) and presided over a gay panic in Newport, Rhode Island (episode 205). Daniels praised the new technology, confidently predicting, and I quote, “Nobody now fears that a Japanese fleet could deal an unexpected blow to our Pacific possessions...Radio makes surprise impossible.”

Are you listening, Tokyo...?

Newspapers got into the game, starting up radio stations as an adjunct to their print news business. In Montana, the Great Falls *Tribune* launched KDYS in May 1922, using a transmitter built for them by a local auto mechanic. They went ahead with this venture despite the fact that there were only fifteen radio receivers in the city of Great Falls at the time. Sadly, this venture only lasted two years. Fun fact: Great Falls, Montana is Mrs. History of the Twentieth Century's home town.

In Michigan, the Detroit *News* had better luck with its station, WWJ, which is still on the air as an all-news AM radio station in our time.

Department stores quickly discovered that having a radio station was good for business. They sold radio receivers, so having a station right there in the building to use for demonstration purposes was handy. And the reception was perfect, since the transmitter was right there. Stores

would put the station on display behind glass so customers visiting the store could watch this cutting-edge technology in operation first hand. Perhaps the first store to try this was the Bamberger's Department Store in Newark, which started up station WOR in February 1922. The following month, two competing department stores in Philadelphia applied for licenses and then competed to see who could get on the air first. These would be Gimbel's, with its station WIP, and Strawbridge and Clothier, with its station, WFI (later known as WFIL). In the end, they both started up on the same day. WIP recruited the Mayor of Philadelphia, J. Hampton Moore, for their big event. Not to be outdone, WFI got the Governor of Pennsylvania, William Sproul, to headline *their* opening day. Both of these stations are still on the air in our time. John Wanamaker's Philadelphia department store followed with its WOO, which only lasted until 1929, but in its time boasted concerts of "the World's Greatest Organ," the one built for the 1904 World's Fair that John Wanamaker bought afterward and shipped to his store in Philadelphia, episode 26.

Fun fact: I grew up listening to WIP, WFIL, and WOR. Well, it was fun for me.

Having all these stations broadcasting on the same frequency quickly became impractical. One oddity of the time was that a different frequency, 618 kHz, was designated for government services. Many of these new radio stations did weather reports and crop reports, in which they were passing on information from the US government, and for a while the Commerce Department was requiring that stations had to change frequencies before giving out government information, so radio announcers were forced to give their listeners a heads-up that the station was about to change frequencies to give the weather report and encourage them to tune their radios to the new frequency so they wouldn't miss out on anything.

This couldn't go on. In early 1922, just as the radio boom was taking off, Secretary of Commerce Herbert Hoover called a conference of industry leaders from RCA, GE, and AT&T to advise the Department on how to regulate the new medium. You might question a Cabinet secretary inviting the leaders of the industry being regulated to advise him on how to regulate it. Obviously, they're going to tell him whatever they think will make the most money for themselves; even people at the time made that criticism. In fairness to Hoover though, he was operating under a law that had been enacted back in 1912 that had never envisioned the explosion of demand for radio he was now dealing with. The 1912 law did not give discretion in granting licenses for one thing, so Hoover's Commerce Department could not refuse anyone who brought them a valid application, which was part of the reason for this chaotic growth.

The prospect of radio stations putting advertising on the air came up at this conference. The consensus view was that such a development would be repugnant. Even Hoover himself, not exactly an enemy of big business, said, "It is inconceivable that we should allow so great a possibility for service to be drowned in advertising chatter."

Hoover called another conference in 1923, by which time the situation had gotten completely out of control. With no aid from Congress in the form of new legislation, the industry itself voted at the 1923 conference in Washington its view that the Commerce Secretary had the power to regulate the times and frequencies at which radio stations could broadcast. The Department took the hint and soon unveiled a new system, dividing radio stations into different categories. Powerful stations serving large cities would each get their own unique frequency in one part of the broadcast band. Medium-size stations would get a different part of the band, and there two stations might get the same frequency, provided they were separated by a certain distance. Smaller stations were assigned a third part of the broadcast band and only permitted to operate in daytime. This was the genesis of the system still in use in the United States in our time.

Dissenting broadcasters would go to court to challenge the Commerce Department on these decisions, until 1927, when Congress finally enacted new legislation, repealing the 1912 Act and creating a new agency, the Federal Radio Commission. In 1934, the agency would be granted new powers and redesignated the Federal Communications Commission, or FCC.

Next came the question of broadcast material, or “content” as we would say in our time. All these new radio stations, all these hundreds of thousands of radio receivers, were for naught unless there was something interesting to listen to. Radio stations quickly discovered that if they went quiet, they’d lose their audiences to other stations, so it was essential to keep it coming, whatever “it” might be. The first radio stations turned to their own employees to give talks, or recite poems, or even play musical instruments and sing songs as a way to fill up air time.

When that wasn’t enough, they’d open up to the public and invite individuals and groups to come in and perform. No one was asked to audition; the station merely took for granted the performers could do what they said they could do. The results were as, shall we say uneven, as you might expect. Also, people sometimes signed up for timeslots on the station and then never showed up, leaving the station operators scrambling to find a replacement. Nobody got paid for these performances, you understand, though they were told that they would benefit from the exposure radio gave them. Where have I heard that one before...?

There was also the problem of what to do if the performer became, shall we say, inappropriate...? When the Broadway actress Olga Petrova, who was performing in a show in Newark, offered to come in to Westinghouse’s WJZ and read nursery rhymes for children, the staff was a little nervous. Petrova was well known to be a follower of Margaret Sanger and the American Birth Control League; this was obviously a subject completely inappropriate for radio. Their worst fears were realized when Petrova tweaked the words to a classic nursery rhyme and told the radio audience, “There was an old woman who lived in a shoe/She had so many children because she didn’t know what to do.”

Obviously, Washington was going to come down on them like a ton of bricks if they ever let something like that happen again. And this was the era of the Red Scare. People asked, what

would happen if a Communist somehow got on the air. In Chicago, Westinghouse's KYW radio station received a request from a man who wanted to give a talk on American values. He even submitted a script for approval. It seemed safe enough, but when he spoke, it turned out he was a leader in the Ku Klux Klan, and his talk transitioned into one on the virtues of white supremacy.

Well, at least he wasn't a Communist, am I right...?

By the way, I believe I said last week that KYW was born in Detroit, but I was mistaken. It was Chicago, although only temporarily, until it moves to Philadelphia.

Anyway, the solution the engineers devised for this problem of people going off script was called "the button." The station engineer's controls were fitted with an emergency button that would cut off the microphone and replace it with a phonograph record if anything went amiss in the studio.

Which brings us to the subject of phonograph records.

People had been playing phonograph records over AM radio since the earliest experiments in transmitting sound. Remember David Sarnoff and his demonstrations of the "radio music box." Records were a free and easy way to put entertainment onto the airwaves. When RCA began its first station, WDY in Newark, no less an authority in phonographs than Thomas Edison himself lent the station one of his phonograph machines, but when he listened to the broadcast and heard the quality of the sound, he made them give it back, out of fear that the poor quality of the sound in the radio transmission reflected badly on his phonograph machine.

RCA worked out the technical problem there, with an assist from Mr. Edison himself, but once it became standard practice to play records on the radio, the composers and musicians and artists and producers whose work went into those records wanted to be paid. The radio stations were shocked, shocked to learn that someone expected to be paid for the broadcast of their work. Surely the free publicity they were getting for their records was payment enough? No? You mean to sully the purity of radio with grasping commerce?

There was no Federal copyright law protecting sound recordings in the US at the time. The US would not enact such a law until 1972, believe it or not. But sheet music certainly did have copyright protection. Remember that before radio and phonographs, Tin Pan Alley songwriters made their bread and butter selling sheet music for performance in private homes, usually on a piano. Under the copyright law in effect at the time, songwriters were entitled to royalties for any "public performance" of their songs.

Did radio play constitute a public performance? ASCAP thought so. ASCAP was, and is, the American Society of Composers, Authors, and Publishers, a non-profit organization created in 1914 to protect the rights of composers, songwriters, and their publishers. Its founding members were some of the biggest names of the time, including a few we've encountered or will encounter in this podcast: Victor Herbert, Jerome Kern, Irving Berlin, John Philip Sousa. In

1917, ASCAP had won a crucial Supreme Court case, *Herbert v. Shanley*, concerning Shanley's Restaurant in New York City, which hired musicians to perform for its customers. When Victor Herbert sued them for royalties, the lower court had dismissed the case on the grounds that the restaurant didn't charge an admission fee to listen to the music, thus there was no income and therefore no royalty. The Supreme Court reversed the decision, in an opinion written by Oliver Wendell Holmes, which noted that "the Defendant's performances are not eleemosynary."

Uh, that means they aren't acts of charity. The music is part of what the customers pay for when they get the check.

ASCAP felt that was sufficient precedent and demanded that radio stations also pay licensing fees to perform works by ASCAP songwriters. The matter was litigated, and the courts agreed. Radio stations had to pay ASCAP licensing fees if they wanted to broadcast records—or live performances—of music written by ASCAP composers.

This particular quarrel was but one example of a larger discord that the rapid rise of radio provoked. With all this excitement, and all these sales, everyone wanted in on the action. Initially, the business side of radio was seen to be the sale of radio receivers, and also hardware for transmission stations. And it worked! The 1920s were a boom time for sales of electronics. You'd think there would be plenty of money for everyone, but no. There were lots of people who felt they were getting the shaft, notably Thomas Edison, who was miffed that the vacuum tubes that made radio possible were based on his cutting-edge light bulb experiments, but he wasn't getting a penny out of it.

RCA sold radio receivers, and they were selling them like hotcakes, just as David Sarnoff had predicted. They also sold replacement parts, especially those vacuum tubes which, like light bulbs, burned out after a while and needed to be replaced. That's why vacuum tubes were made with pins to be inserted into sockets; so they could be pulled out when they stopped working, which they inevitably did.

Believe it or not though, the people at RCA were miffed that customers were buying RCA tubes and using them to build their own radios, instead of buying RCA radios, as God intended. RCA tried adding legal language clarifying that the tubes were sold only for use in RCA radios, and that any other use was unlawful. This attracted the attention of the Federal Trade Commission as an anti-trust matter. Please note that before the radio boom was even a year old, the industry was already being investigated for monopolistic behavior.

Still, the radio boom was making plenty of money for RCA, but the ASCAP dispute underscored a problem. The current business model, under which radio stations gave away their programming free of charge was not sustainable. The cost of operating the station was supposed to come back to the company in radio sales, but RCA couldn't broadcast only to RCA sets. Anybody's radio could pick up an RCA station, even if it was built by a hobbyist, or by a competitor like, say,

Zenith Radio, a company organized in 1923 by a couple of radio hobbyists who decided to go pro.

In Britain, where the Post Office could collect license fees on radios sold, it was a simple matter to put that money into a fund which the British Broadcasting Company could draw upon to pay for programming. In 1926, a new public entity, the British Broadcasting Corporation was created, to provide broadcast entertainment funded by license fees. And that's the system that's been in place ever since, and it has been replicated in many other European countries.

In the United States, though, it was different. Proposals for a similar system came up in the US, and some industry leaders, like David Sarnoff, supported them. But the sticking point in America was the divide between companies under the RCA umbrella, the GEs and Westinghouses and AT&Ts, and the companies outside, competing with RCA, like Zenith. They didn't want their own products taxed and watch that money go into the pockets of a competitor, RCA, while the RCA conglomerate couldn't agree on how to allocate those revenues, so a British-style funding system never got off the ground in the United States.

The first company to venture into an American-style solution to the funding problem was, who else, AT&T. AT&T, the phone company, through their equipment subsidiary, Western Electric, was part of the consortium behind RCA. Under the RCA deal signed in 1921, AT&T retained the right to use radio for two-way communications. They were the telephone company, after all. But when the radio craze took off in 1922, AT&T had to face the realization that they had signed away the most interesting, not to mention most lucrative, part of the radio business.

But AT&T was never one to give up without a fight. They claimed their share of the radio boom anyway, with two innovations. One was a legal innovation. They decided that their own radio patents gave them the exclusive right to manufacture radio transmitters. Only a few of the hundreds of radio stations blooming across America were using AT&T equipment. Most were using GE or Westinghouse or RCA equipment. Many had built their own transmitters. AT&T's lawyers sent out demand letters to every radio station not using AT&T equipment, explaining that they were infringing on AT&T patents and now owed the company an annual licensing fee for the use of a transmitter AT&T had had nothing to do with making.

These letters went out about the same time ASCAP began making its demands. Radio station operators were furious with both organizations, but unlike ASCAP, AT&T's claim was pretty specious and it would not hold up in court. It did lead to some contentious meetings with AT&T's alleged partners, General Electric and RCA, who were equally furious that after signing onto a patent-sharing arrangement with them just last year, AT&T was now renegeing.

AT&T's other move was quite a bit more successful. It began its own radio station in New York, WEAf. Under the RCA agreements, AT&T wasn't supposed to get into broadcasting, but WEAf was envisioned as a different kind of radio station. Unlike its competitors, AT&T would not provide entertainment. Instead, it would lease blocks of time on its radio station to anyone

who wanted to hire a radio transmitter and send out a message. AT&T analogized WEAF to a phone booth. Anyone who wanted to could walk into a phone booth and for the price of one nickel, they could use the telephone to call anyone they wanted and say anything they wanted for three minutes. Similarly, anyone who paid the fee could come into the WEAF studio and broadcast whatever they wanted for ten minutes. It was a radio phone booth.

The other stations cried foul. AT&T was charging money for access to the airwaves, which were a public resource, like a river or the air. Radio was being cheapened for the sake of commerce. AT&T fought back, arguing that WEAF was available to anyone who wanted it, unlike the other stations, which were wholly controlled by their owners and broadcast only what their owners chose to broadcast. Actually you see, it was AT&T that was freeing the airwaves from the commercial interests, by making them available to everyone.

The initial reaction to this development ranged from indifference to indignance. One magazine condemned the idea as “mercenary,” while another called it “positively offensive.” If that wasn’t bad enough, AT&T found there wasn’t much of a market for what they were selling. Not that they didn’t try. When the New York City government approached AT&T about buying a transmitter for a proposed city-owned station, AT&T’s sales department tried to sell them on the idea of simply buying time on the AT&T station. When this pitch was presented to the city’s representative he pounded the table and exclaimed, “What? The great City of New York subsidiary to a commercial company? Decidedly no!”

AT&T began the project determined not to produce its own programming, but soon realized no one would ever buy time on a station no one listened to, so like its competitors, the company was forced to recruit employees who could sing or play music to provide entertainment. Finally, in August 1922, WEAF broadcast its first paying customer, a real estate developer in Queens. (What is it with real estate developers in Queens?) This guy paid \$50 for ten minutes of air time to extol the virtues of getting out of the crowded, stuffy city and back to nature, by renting an apartment in Queens, just minutes away from Manhattan on the subway.

It worked. It sold apartments well enough that he came back and did it again. Other businesses followed, including Tidewater Oil and American Express.

AT&T also had technical expertise, especially in the realm of wired communication. So WEAF experimented with remote broadcasts, such as sending an announcer to call the Harvard-Yale football game over a telephone line back to New York. AT&T had the technology to reproduce the announcer’s voice as clearly as if he were in the studio. But when other broadcasters tried to duplicate these accomplishments, AT&T refused to supply them with telephone lines.

Meanwhile, other broadcasters wrestled with the problem of how to get enough talent on the air. With artists increasingly balking at suggestions they should perform for no charge, radio stations turned to local businesses, encouraging them to underwrite the costs of radio entertainers for the sake of the good publicity it would engender. Hotels provided music from their ballrooms.

Wanamaker's broadcast its store's organ concerts. Banks paid for financial news, brokers for stock market reports. Soon radio station schedules were filling up with the likes of Baldwin piano recitals, the Schrafft's Tea Room Orchestra, the Magnolia Petroleum Company Band, and talks on hunting and fishing provided by *Field and Stream* magazine.

Understand that at this time, these programs did not have commercials as we know them today; they merely publicized the name of the business paying for the entertainment up front, rather like the credits you see on American public television programs in our time. Sometimes they went so far as to include the business's address and phone number, but that was it. If you didn't already know what Schrafft's Tea Room was, for example, you weren't going to find out by listening to their program. The companies paying for these programs were genteelly referred to as underwriters or patrons or sometimes even chaperones. The word "sponsor" was deemed too commercial.

Even so, by the end of 1922, radio's boom year, the industry magazine *Radio Broadcast* was complaining that "dribblets of advertising, indirect but unmistakable, are floating through the ether every day...The woods are full of opportunists who are restrained by no scruples when the scent of profit comes down the wind."

Meanwhile, back at AT&T, the company that had first demonstrated how money could be made off of radio broadcasting found they weren't making enough of it to make WEAF worth the trouble. Within the company, management was divided over whether it should go into radio in a big way or stick to being The Phone Company and focus on its lucrative telephone business. With relations between AT&T and its nominal partners GE, Westinghouse, and RCA growing increasingly hostile, a deal was eventually struck. AT&T would give up on its quixotic effort to make everyone pay license fees to use their own radio transmitters, and it would sell WEAF to RCA and get out of the broadcasting business. In exchange, RCA and most other broadcasters would contract with AT&T to provide the telephone lines that would allow for freer use of remote broadcasting.

But by this time, those AT&T telephone lines had already proven themselves useful in other ways than just remote broadcasting. By the time of the AT&T agreement, the radio industry was already using telephone lines to link radio stations together. One station, like WEAF in New York City, could produce a program, which would then be sent out over telephone lines to be broadcast at the same time through other radio transmitters in other cities, potentially across the whole United States. That would solve the problem of finding programming. No longer would a hundred radio stations each be scrambling to find its own performers. The entire nation could listen to one music performance, or one news broadcast, on this radio...network, if you will.

But that is a story for another episode. We'll have to stop here for today. I thank you for listening, and I'd especially like to thank Robert for his kind donation, and thank you to Jeremy for becoming a patron of the podcast. Donors and patrons like Robert and Jeremy help cover the

costs of making this show, which in turn keeps the podcast available free for everyone, so my thanks to them and to all of you who have pitched in and helped out. If you'd like to become a patron or make a donation, just visit the website, historyofthetwentiethcentury.com and click on the PayPal or Patreon buttons.

The podcast website also contains notes about the music used on the podcast. Sometimes it's my own work, sometimes it's licensed, but many times, the music you hear here is free and downloadable. If you hear a piece of music on the podcast and you would like to know more about it, including the composer, the performers, and a link to where you can download it, that would be the place to go. While you're there, you can also leave a comment and let me know what you thought about today's show.

Next week is a bye week for the podcast, but I hope you'll join me in two weeks' time, on *The History of the Twentieth Century*, as we delve into these radio networks and what they mean for the future of broadcasting. That's in two weeks' time, here, on *The History of the Twentieth Century*.

Oh, and one more thing. Concerns about what material would or would not be appropriate to broadcast over radio remained a worrisome topic for radio broadcasters. Obviously, Communism and birth control were forbidden topics, but where should you draw the line? The producers of the 1921 Broadway musical *Tangerine* offered to bring the cast out to Newark to perform the whole show in front of the microphone at the WJZ studio, but the performance was cancelled the day before it was meant to air when the radio station operators realized the show, billed as "A Musical Satire of the Sexes" contained risqué humor.

Similarly, over at WEA, AT&T's phone booth of the air, a toothpaste company wanted to buy time for a program on oral hygiene, which prompted a spirited debate within the station over whether such an intimate topic as tooth-brushing was appropriate material for a public radio broadcast.

[music: Closing Theme]