

During the period from 1920 to 1927, the regulation of broadcast stations was vested in the Department of Commerce, under the Wireless Act of 1912. In 1927 the authority was passed to the newly formed Federal Radio Commission, predecessor of today's FCC. However, the transition was far from an orderly transfer of power. The process had been slowed by years of Congressional inaction, and was capped by a chaotic eight month period when all governmental controls disappeared.

The difficulties were centered around the Wireless Act of 1912. This act, passed before broadcasting for the public existed, was vague in the powers it granted, in addition to being totally outdated for the current state of activities. As early as December 1922, an article appeared in RADIO WORLD telling of the attempts of Herbert Hoover, then Secretary of Commerce, to get a more comprehensive law enacted. Hoover was unsure whether he had the authority, under the 1912 law, to assign specific wavelengths and powers to stations operating on the broadcast band. He was empowered to issue licenses, but was unsure whether he was required to continue granting licenses no matter how congested conditions became. A radio bill to correct these defects was proposed at Hoover's request in the 1922 Congress, but it was not enacted. Similar measures introduced each of the following years met the same fate. Still, Hoover was able to keep the system going, instituting changes as needed, even though they were based on uncertain legal grounds.

The first modification had occurred in the summer of 1922, when the stations were divided among two "waves," for "Class A" and "Class B" broadcasters. Previously, beginning with KDKA in 1920, all broadcasting stations were assigned to the same wavelength of 360 meters (833 khz). With each additional station the interference on this wave grew. So, as a remedy, a second wave, on 400 meters (750 khz), was added, being designated for "Class B" broadcasters exclusively. These stations were defined as ones which used 500 to 1000 watts of power, and did not play phonograph records for their programs. Thus, the Class B broadcasters formed a group of more powerful stations, with better programming.

By 1926 broadcasting was a mixture of the primitive and the modern. The broadcast band now extended from 545.1 to 199.9 meters (550 to 1500 khz), and had recently been divided into 96 frequencies exactly 10 kilocycles apart. Although the frequencies of the stations were now being determined by kilocycles, the public generally preferred the older method of stating wavelengths in meters, although they often rounded the value to the nearest whole meter, for simplicity.

The 10 kilocycle separation eliminated the problem of heterodyning between stations on adjacent frequencies. However, there still was a serious problem of heterodyning between co-channel stations, because of the lack of quality frequency control. A study in 1927 showed 1/3 to 1/2 of the stations were more than 500 cycles off frequency, and in early 1926 only KDKA and WGY had installed quartz crystals for effective frequency control.

In 1926 there were 53 Class B frequencies, extending from 545.1m to 280.2m, inclusive (550 to 1070 khz). 47 belonged to the United States, with the other 6, under a "gentlemen's agreement," going to Canada. Class B stations now used 500 to 5000 watts, and were similar in coverage to today's Clear Channel broadcasters. On the Class B frequencies the government had taken great pains to keep interference and heterodyne whistles out. Because the effects of heterodyning extends much farther than the audio travels, the lower powered stations were placed at least half a continent apart, while many of the stronger stations retained exclusive use of their frequencies. Because directional antennas were not developed until the 1930's, these were the only measures which would insure quality reception.

The other 43 frequencies, 277.6m to 199.9m (1080 to 1500 khz) were Class A frequencies, although a few Class B stations also used them. Stations on the Class A wavelengths ranged from 5 to 1000 watts in strength, and generally served local audiences. The Class A frequencies were not protected from the effects of heterodyning as much as the Class B wavelengths were, and were often filled with the voices and whistles of clashing signals.

The approximately 25 Cuban and 15 Mexican broadcasters still used meters exclusively, and usually operated on round number wavelengths, such as 330m or 275m.

The broadcast band of early 1926 was congested. There were about 520 stations operating in the United States, with the number slowly dropping. The decrease was not from lack of interest, but because Secretary Hoover had decided to stop issuing licenses in October 1925, explaining that the band was already filled beyond capacity.

The calm was threatened by a suit in Chicago. This city had some of the most congested airwaves, and, when Zenith Radio Corporation ran WJAZ in the Windy City, their license limited their Class B facility to only two hours of broadcasting a week. Their timeslot was from 10:00 PM to 12:00 PM Thursdays, on 322.4m (930 khz). This was the frequency used by KOA in Denver, which apparently was off on Thursdays to observe Denver's silent night. WJAZ was unhappy with its timesharing scheme, so it moved to 329.5m (910 khz), and began broadcasting on what, until now, had been an exclusive Canadian frequency. No permission had been given for the move, so the Department of Commerce took Zenith to court for its station's "wave piracy." WJAZ's defense in the case was that Hoover had overstepped his powers in assigning WJAZ's frequency and times of operation. On April 16, 1926, Judge James H. Wilkenson announced his decision. He sided with the wayward Chicago broadcaster, saying that it had only broken a rule that was instituted without legal basis.

The reaction was swift in coming. Hoover declared that the only way to avoid chaos on the radio waves was immediate action by Congress. Either the strengthening of the powers of the Secretary of Commerce, or the institution of an independent committee similar to the Interstate Commerce Commission, would be necessary to save broadcasting from complete collapse.

Eugene F. McDonald, Jr., President of the Zenith Radio Corporation, which owned WJAZ, strongly disagreed with Hoover's view of imminent chaos. He noted that the Secretary still had the authority to issue licenses, and, if Hoover thought an area too congested, he did not have to give out any more licenses. In addition, McDonald claimed that only 5% of the broadcasters had the special licenses necessary to legally change frequencies.

Everyone now looked to Congress to correct the tenuous situation. The House of Representatives had passed a bill on March 5, which had been introduced by Wallace H. White, Jr., of Maine. Pressure was now put on the Senate to get moving. Finally, on July 2, they passed a bill introduced by Clarence C. Dill of Montana. The measures were not the same; Rep. White's law increased the powers of the Secretary of Commerce, while Sen. Dill's formed an independent commission. The differences would have to be worked out in committee. Unfortunately, there was no time for this, as Congress adjourned, and would not be in session until five months later, on December 8, after the elections.

Because Secretary Hoover was still unsure as to what powers he did and did not have, immediately after Congress adjourned he asked the Department of Justice to give its opinion on what authorities he held. Acting Attorney Donovan issued the opinion on July 8. Not only did he feel that Hoover had no control over the frequencies that the stations used, or their times of operation, except on the government longwave band, but he also added that the stations were free to use whatever power they wished. Lastly, and most devastatingly, he declared that Hoover was required to issue a license to any person whose station was ready to go on the air.

Now stripped of virtually all his power, Secretary Hoover asked for restraint from the stations. He requested that they voluntarily retain their frequencies and powers. In particular, he asked that the Canadian frequencies not be interfered with. Most broadcasters vowed to follow the Secretary's request. The strongest support for the status quo came from Class B broadcasters, who could only be hurt by "wave pirates" jumping to their frequencies.

There were many factors which, it was believed, would limit any chaos the now unregulated broadcasters would have to contend with. First, it was felt that Congress would quickly pass a new bill as soon as it reconvened. Thus, anyone who went to the expense of erecting a new station would have to face the possibility that there might not be room for them when the new system was set up. Additionally, any station changing their frequency or increasing their power might face attacks from the public, as well as possible unsympathetic feelings from the new controllers.

On the other hand, there were also strong enticements for a station to take advantage of its new freedom. Some broadcasters had previously requested permission to make a change, only to see the administration break down before their request could be acted on. Now they were free to make the change they wished. Others saw a unique chance to grab a choice Class B frequency, and felt compelled to act before some other station made the move. Lastly, increasing your power was a good method for increasing your audience, as well as an effective way to fight interference from other stations (as long as they didn't fight back!)

Fortunately, the first few months after the end of controls showed relatively little change throughout the nation. In fact, some pointed to this restraint as proof of the lack of need for tight governmental regulation in broadcasting. The few stations which did make shifts genuinely did their best to limit possible interference to other broadcasters.

New York City had many of the first changes. The New York Times reported on July 16 that four stations, WMSG, WRNY, WBBR, and WBNY had moved from their respective Class A frequencies to Class B ones (most wave jumping was from Class A to Class B frequencies). The next day two more made the jump, WNJ and WHAP. Although five of these broadcasters chose standard frequencies, WHAP decided that the best location to limit interference to WOR and WJZ was a split frequency of 697 khz.

Two weeks after the cessation of governmental control, the Broadcast Listeners of America, based in Chicago, announced a "strike" against air pirates, urging their members not to listen to stations which had changed wavelength or increased their power. Although the strike had little success, this group had, a year earlier, led a strike which successfully forced the Chicago broadcasters to retain their Monday Silent Night. (Silent Night in Chicago finally died in December 1927, when the FRC assigned one of the Chicago wavelengths to a non-Chicago broadcaster for Monday nights. Faced with a now-or-never situation, the Chicago broadcasters unanimously scrapped their Silent Night, to keep from permanently losing the Monday night operation. Many individual stations, led by KQW - San Jose (now KCBS) in 1926 had been violating silent nights, but this was the first city-wide dropping of the practice.)

WBBM in Chicago announced in July that they would raise the power of their Class B facility from 1500 to 10,000 watts, twice what any other midwest broadcaster was using. They quickly backed down, perhaps because of the listeners strike, while explaining that the move had been designed to protect themselves from the interference of possible wave jumpers. They added that they could still increase their power if interference increased.

A major development occurred in Chicago in October. WGES had moved from 249.9m to 315.6m (1200 to 950 khz), and WGN, on 302.8m (990 khz) claimed this was causing too much interference to their signal. The dispute was taken to court, and the ruling, in favor of WGN, drew on the common law principle that pioneers in the west could not dirty stream water which prior settlers were using. WGES was required to maintain a separation of at least 50 kilocycles from WGN. Many saw this ruling as an important method for stabilizing the radio situation.

During the same month WLWL in New York City moved to a new Class B frequency, and received complaints from WGY, WOR, and WRNY. (WRNY itself had jumped three months earlier, and was involved in litigation with WHN.) WLWL apologized for the trouble their new location caused, but noted that they were forced to jump in order to escape the interference from wave pirates on their old frequency.

In November the Department of Commerce released statistics on changes which had occurred since July 1. During the three and a half months 63 new stations appeared, and, of the old stations, 25 changed their location, 63 increased their power, and 62 shifted their wavelength. The total number of broadcasters on the air was now 595. It was the major cities which were, and would continue to be, hardest hit. Chicago had added 22 new stations and 18 wavelength changes, with 20 more stations under construction. New York City was in second, with 11 new stations, and 8 wave jumps. 40 new stations throughout the country were reported preparing to go on the air.

Congress finally reconvened in December. Their return caused a "last minute rush" to get stations on the air before a measure, proposed by Rep. White to stop licensing new stations, could be passed. It was a false alarm, however, as the measure was not enacted. The influx of new stations continued.

It became clear that Congress was going to have trouble agreeing on the necessary legislation. There was still a major battle over whether the powers of the Secretary of Commerce should be increased (some said this would form a position with too much power), or if a controlling or advisory committee should be formed. President Coolidge opposed a commission, and there were rumors that he would veto any bills which formed one.

With the coming of winter, listening conditions were becoming more and more congested, especially in the east. Sales of better radios were declining, as long distance reception became difficult or impossible.

Interference and heterodyne whistles started appearing on the Class B frequencies, and in some areas the Class A frequencies had become a mass of confusion.

The totals for the six month period from July 1 to Dec. 31 showed an acceleration of growth. Since the end of controls 47 new stations had been erected in Chicago, 25 in Detroit, 23 in Seattle, and 22 in New York. For the two weeks at the end of the year alone 31 new stations took the air, 5 increased their power, and 6 changed their frequency. 132 new stations were under construction.

The beginning of the new year brought a complaint from Canada. For months they had watched the situation in the United States deteriorate, with more and more Yankee stations violating Canadian rights, especially on their exclusive frequencies. CFCA in Toronto, on 356.9m (840 khz), was bothered when WKBW, across Lake Ontario in Buffalo, pirated the wave of 352.5m (850 khz). CFCA complained that this interfered with the reception of their signal by their many listeners outside of Toronto. WKBW retorted that the interference was minor, and refused to move. They also added that they were not a "pirate," as they were acting within U.S. law (or lack of it). The Canadian Government was forced to switch the frequency of CFCA with that of an Ottawa broadcaster, to limit the WKBW interference. A month later the Canadians returned to their original frequencies.

Finally, in late February, almost three months after Congress had reconvened, a new law was finally signed. A compromise measure, it formed a "temporary" Federal Radio Commission composed of five members. The commission was given a year to make necessary changes, after which its power would revert back to the Secretary of Commerce. However, Senator Dill, main supporter of the commission, was not surprised to see the "temporary" board get continuous extensions until the 1933 formation of the FCC. The legislation now passed was by no means uncontroversial; an unsuccessful attempt had been made in the Senate to filibuster the bill to death.

At last the licensing of new stations ended. The final totals are impressive. In 8 months 221 new stations had taken to the air, and an amazing 65 of these were in Chicago. 50 stations had changed their location, 197 had increased their power, and 111 had changed their frequency. There were now 733 stations on the air, with 182 more under construction, although these now had little hope of ever getting on the air.

The main problem that the new FRC now faced was what to do with all the stations. The broadcast band, as it stood, just could not absorb the number of stations now on the air. Some felt that only two stations, one in the east and the other in the west, should be allowed on each frequency. This would mean getting rid of 2/3 of the broadcasters. Literary Digest, which had watched the developments with interest, was in favor of creating room by removing all stations which had wave-jumped. However, since wave jumping had not been, strictly speaking, illegal, this action would have been on shaky legal ground. Another proposal was to accommodate the extra stations by adding 50 new frequencies, from 200m to 150m (1500 to 2000 khz), to the broadcast band. This proposition was found to be impractical, because the expansion would have made most of the radios in use obsolete. Radio Digest - Illustrated had no suggestions, but, on hearing that some stations might lose their licenses, promptly ran a contest to let its readers vote for the stations which they liked best.

In the end, after a period of issuing only 60 day licenses, 89 stations (about 12% of the broadcasters) were forced off the air by the FRC, with many others forced to go to time-sharing schemes.

The period of broadcasting anarchy was now over. Controversies continued under the FRC, but the public was glad to see the stability which the new regulators brought.

Sources for this article were the New York Times, Radio Age, Radio Broadcast, Radio Digest - Illustrated, Radio World, Literary Digest, and A Tower in Babel, by Erik Barnouw. Mr. Barnouw's book is strongly recommended for those interested in learning more about the early history of radio.

The End

