

inventor/entrepreneurs? Can or will they learn from the experience of their predecessors?

End Notes

Unique Characteristics of Broadcasting: Because the radio spectrum is quite different from a piece of real estate, radio produced a property rights problem. Allowing individuals to own a portion of the spectrum was not feasible. The government has always considered the electromagnetic spectrum in which radio waves travel to be public property. But, while the capacity of the Mississippi River to carry boats and barges has always exceeded the capacity demanded, it was not long before the capacity of the portion of the spectrum allocated to radio was inadequate to meet the demand for it. (The same would later be true for television.)

Navigable waterways present no free speech problem, but radio and television do. So, one of the early issues the government had to decide was whether radio would be allowed the same freedom of speech that newspapers and magazines have. Another issue that had to be settled was whether radio stations were to be treated as common carriers as the telephone companies were.

From radio's earliest days there was widespread agreement that spectrum scarcity and the possibility that one station would drown out the transmissions of another one meant that government regulation was necessary. It chose to limit the number of stations, not by charging a high price for a broadcasting license, but by limiting the number of free licenses granted.

The number of economically viable radio stations that can exist differs greatly between various geographically equally-sized areas. In the early years of broadcasting, it was not economically feasible to locate even one radio station in many rural areas. Therefore, some stations located in cities, called clear channel stations, were allocated enough power to reach distant, rural areas during prime listening hours at night. Local stations broadcasting on these stations' channels (frequencies) were forbidden to broadcast at night. The clear channel stations' reach was substantial, not only because they were allowed more powerful transmitters, but because **radio waves travel further at night**. Some claimed that it was because population density was much greater in the Northeast than in the rest of the country, and this was the wealthiest region, that the more expensive and powerful stations were clustered in this region. However, Southerners and Westerners argued that this was the result of favoritism by the Department of Commerce and Labor. Their complaints forced the government to scatter clear channel stations throughout the country.

Because radio waves cross international borders, international agreement on frequency assignments was necessary. In Europe broadcasting was a government monopoly until after World War II, and European governments pushed hard for broadcasting to be restricted to a very few frequencies. Because in the U.S. broadcasting was dominated by private interests, the U.S. refused to bend to this demand, and it got its way.

Economies of scale in programming led to broadcasting networks being established. They were limited by the government as to how many stations they could own. The ownership of a chain of station was economically advantageous. Only a few networks proved to be economically viable in radio and, later, in television. Network broadcasting is an oligopoly because each network has the potential for taking a lot of business away from its competitors; therefore each network must take into account what the other networks are doing. However, through targeting different audiences, each network can gain some pricing independence in setting its advertising rates. The economic, financial, and regulatory structure established in the radio industry was carried over into the television industry.

The Role of the Government in U.S. Broadcasting: The reason for the Navy's ultimately keen interest in radio and American control of it is not difficult to fathom. Like the United Fruit Company, which, as a side line, went into the radio business, the Navy wanted what we today would call on-line control of its ships' movements and knowledge of their activities. Just as United Fruit did not want its messages transmitted by a competing company, the Navy did not want to depend on either foreigners or private industry. It wanted no repetition of Admiral Dewey's experience at Manila, where in order to inform Washington of his victory there, he had to send dispatch boats to Hong Kong from which a message was telegraphed to the U.S. over British-controlled cables laid under the Indian Ocean, Red Sea, Mediterranean Sea, and Atlantic Ocean. [Barnouw 15]