



The Inventor Who Claimed Too Much

How much right should an inventor have to control the future? That was the question decided by the United States Supreme Court in the famous 1853 case of Samuel Morse and his telegraph, and the answer the Court gave is still the law today.

Samuel Morse was a historical painter who studied his art first at Yale and later in France. In 1832, on the ship back from France, he was sitting and talking with fellow passengers about the great discoveries of the day in the field of electromagnetism, when he had what was to be a brilliant idea that electromagnetism could be used to print information at a distance. Morse was not a scientist, but by the time his ship docked in New York, Morse had made a rudimentary sketch of an electromagnetic telegraph and had come up with the idea of using dots and dashes to represent words in a telegraphic dictionary. Upon arriving home, he excitedly told his family and friends about his idea, and began constructing his first device.

Reality struck however, when he priced the galvanic battery and other materials he would need to make an actual working model. For the next three years, he could not afford to work on his telegraph and went back to painting to earn a living, but he never lost faith in his invention.

In 1835, three years after his original conception, Morse got a big break when he was appointed a professor at the City University of New York. This gave him a steady income and the time and freedom to work on his invention. He immediately turned to it and came up against a fundamental problem. With the equipment he had, he could not even transmit information over 40 feet, hardly enough to constitute a telegraph. It took Morse more than a year, to the spring of 1837, to solve this problem. First, he obtained better equipment, but more significantly, he developed the basic idea, still used today whenever information is sent over long distances, of periodically regenerating the signal at a point where its amplitude can still be detected.

At about the same time he made this breakthrough, he had a bad scare when he read a report of two Frenchmen who had supposedly developed a telegraph. He thought they had beaten him to the prize, but luckily for Morse, their telegraph was nothing new. The scare, however, caused Morse to redouble his efforts and to bring in investors, whose money allowed him to perfect his invention to the point where he was able to apply for a patent.

With his rights secure, Morse turned to making the telegraph a commercial reality. He demonstrated his device at the Franklin Institute in Philadelphia to great acclaim, and publicly exhibited it in the hall of the House of Representatives in Washington. Yet, no private investor was willing to risk the amount of money needed to wire the long distances between cities to produce a commercial telegraph. It was at this point that the United States government stepped in and financed Morse's project. Congress appropriated \$30,000, a princely sum in the 1840s, to build the first commercial telegraph line from Washington to Baltimore.

The rest is history. By the 1850s, there were more than 4500 miles of telegraph lines between all the principal cities of the United States, from Boston to New Orleans.

As is also part of history, great inventions lead to pirates. Morse had commercialized his patents by granting licenses for particular parts of the country. One of his licensees, Henry O'Reilly, decided to expand into the state of Kentucky, where he was not licensed. To protect his rights, Morse brought suit against O'Reilly in the Circuit Court for Kentucky where he was successful in enjoining O'Reilly's unlicensed telegraph.

O'Reilly appealed the Circuit Court's decision to the United States Supreme Court. Morse's patent contained eight claims, the first seven of which dealt with specific aspects of his invention, including his now famous Morse Code. The Supreme Court had no problem in finding these claims valid and infringed by O'Reilly and thus affirmed the lower court's injunction based on these claims.

Morse's eighth claim, however, was a different story. In that claim, Morse sought fundamental protection for his basic idea of using electromagnetism to print at a distance, without reference to the specific equipment disclosed in his patent. Consequently, if time had been compressed, Claim 8 would have covered such modern inventions as the teletype and the fax machine. It was this unending scope that caused the Supreme Court to say no to this claim. The Court could foresee that "some future inventor, in the onward march of science, may discover a mode of writing or printing at a distance by means of electric or galvanic current, without using any part of the process or combination set forth in the plaintiff's specification." Yet, if Morse's Claim 8 was allowed to stand, Morse could control such improvements, which the Court felt was unfair to the public.

This rule of law, now more than 140 years old, is still applied today. No matter how great an invention may be, there comes a point where a court will step in and say that the public's right supersedes the inventor's right. Fortunately for Morse, he was able to stop O'Reilly's infringement based on his narrower claims. Similarly, inventors seeking broad patent protection today include narrower claims in their patents to protect against the possibility that a court may find that they, too, have claimed too much.

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