

## Telegraph: Early Postal Role

Before the 1830s, a "telegraph" was any system of sending messages over a distance without a physical exchange between the sender and receiver. The few telegraph systems then in operation were "optical telegraphs" — they did not transmit messages electronically, but visually, with people receiving and sending visible signals.<sup>1</sup> Although chains of relay towers extended the reach of transmissions, optical telegraphs could not be used at night or in bad weather.

### Congressional Interest in Telegraphs

In February 1837, Congress asked Secretary of the Treasury Levi Woodbury to investigate and report on the "propriety of establishing a system of telegraphs for the United States."<sup>2</sup> This request was due at least in part to a petition of Captain Samuel C. Reid to establish a national telegraph system the month before.<sup>3</sup> On March 10, 1837, Woodbury sent out a written request for information to knowledgeable persons. He received more than a dozen replies, including one from Samuel F. B. Morse, an art professor at New York University. All but one respondent discussed the feasibility of installing optical telegraphs along the country's coast lines. Morse, however, enthused at length about an "entirely new mode of telegraphic communication," one he conceived during an ocean voyage five years earlier — an electromagnetic telegraph.<sup>4</sup>

In a letter of September 27, 1837, Morse informed Woodbury that his electromagnetic telegraph would work "at any moment, irrespective of the time of day or night, or state of the weather," noting that "this single point" established "its superiority to all other modes of telegraphic communication now known." Another point in its favor was its ability to record messages, which meant messages could be received even if the device was unattended. Because telegraphs were "another mode of accomplishing the principal object for which the mail is established, to wit: the rapid and regular transmission of intelligence," Morse told Woodbury that it seemed "most natural to connect a telegraphic system with the Post Office Department."<sup>5</sup> He immediately prepared to go to Washington, D.C., to demonstrate his invention.

In February 1838, Morse exhibited his telegraph to Congress and the Van Buren administration in a room at the U.S. Capitol. He hoped to receive government funding for a large-scale trial. Some congressmen were interested in supporting Morse's device, including the members of the House Committee on Commerce, who reported that, if successful, it would be so powerful that "the Government alone should possess the right to control and regulate it" and advised Congress to "enable the inventor to complete his trial."<sup>6</sup> Most congressmen, however, were less than enthusiastic, and Morse left Washington disappointed and empty-handed.

Five years later, at the invitation of the House Committee on Commerce, Morse again went to Washington to demonstrate his device. This time, he met with success. On March 3, 1843, Congress passed an act appropriating \$30,000 to test "the capacity and usefulness" of Morse's telegraph "for the use of the Government of the United States, by constructing a line of said electro-magnetic telegraphs under the superintendence of Professor Samuel F. B. Morse, of such length, and between such points, as shall fully test its practicability and utility ... under the direction of the Secretary of the Treasury."<sup>7</sup>

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<sup>1</sup> The first and largest optical telegraph was established in France by Claude Chappe in the early 1790s; it connected Paris with major French cities and was used for official communications until the 1850s. Chappe's system consisted of lines of towers manned by operators who used telescopes and a large wooden signaling device to communicate with neighboring towers.

<sup>2</sup> Alfred Vail, *The American Electro Magnetic Telegraph, With the Reports of Congress and a Description of All Telegraphs Known* (Philadelphia, PA: Lea & Blanchard, 1845), 67. Google Books, <http://books.google.com> (accessed March 31, 2015).

<sup>3</sup> Reid was a naval hero of the War of 1812; he established an optical telegraph for New York Harbor, for incoming ships to communicate with city merchants, in 1821. See Richard R. John, *Network Nation: Inventing American Telecommunications* (Cambridge, Massachusetts: Belknap Press of Harvard University Press, 2010), 32–33.

<sup>4</sup> Vail, 69.

<sup>5</sup> *Ibid.*, 69–72.

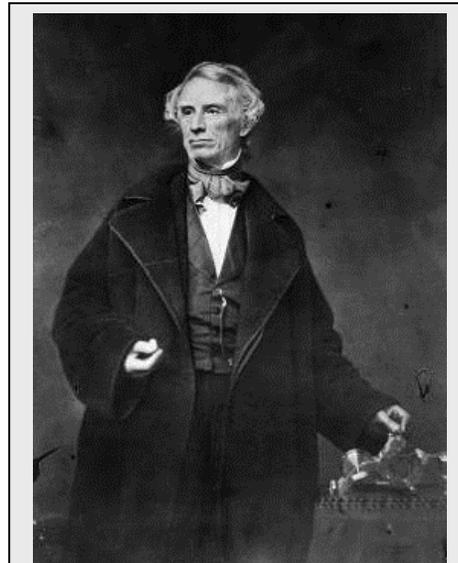
<sup>6</sup> *Ibid.*, 77–78.

<sup>7</sup> 5 Stat. 618.

Morse and his assistants oversaw the construction of the telegraph line. On May 24, 1844, the first message — "What hath God wrought" — was transmitted across the line, which connected the U.S. Capitol in Washington, D.C., with the train depot in Baltimore, Maryland.

Morse's telegraph was the wonder of the age. The nation was awestruck. One reporter noted that the superiority of Morse's telegraph was "beyond all comparison," and that "it commences a new era in the process of correspondence. ... Information will be literally winged with the rapidity of lightning."<sup>8</sup> Another opined that "the Electro-Magnetic telegraph seizes upon the lightning itself, and endows it with flashes of intelligence. ... The speaking lightning has no limit."<sup>9</sup> Morse and Alfred Vail, his principal assistant, operated the telegraph day and night, proving its usefulness in a variety of ways, from communicating political intelligence and press reports, to aiding the apprehension of a criminal fleeing from justice.

In October 1844, the Washington telegraph office moved to the second story of the Post Office. On March 3, 1845, Congress appropriated \$8,000 for the expenses and maintenance of the entire line and put it under the supervision of the Postmaster General.<sup>10</sup>



**Samuel F. B. Morse and his telegraph, circa 1850**

*Courtesy Library of Congress*

## Telegraph Service Begins on a Fee Basis under the Post Office Department

On April 1, 1845, service on the Washington–Baltimore telegraph line was opened to the public under Postmaster General Cave Johnson. Samuel Morse was sworn in as superintendent of the system and an employee of the Post Office Department, at an annual salary of \$2,000. Alfred Vail and Henry J. Rogers went on the Department's payroll as Assistant Superintendents, at \$1,400 and \$1,000.<sup>11</sup>

Johnson set the postage rate for telegraphic messages at one-quarter of one cent for each character, to be prepaid by the sender at the office of dispatch. At the receiving office, messages were to be translated in "a fair handwriting" and given to penny postmen for delivery, who would be compensated as they were for letter delivery.<sup>12</sup> Johnson set the postage rate for telegraphic messages deliberately low — at half the rate suggested by Morse — to encourage the use of the system. In October 1846, he lowered it even more.<sup>13</sup>

Despite the low rate, the government's telegraph line was little used. In the first four days of service, only one message was sent, by a curious office-seeker who spent a penny just to see the telegraph operate.<sup>14</sup> In the first six months, the system cost \$3,244.99 to operate, but brought in only \$413.44, leading Johnson to declare that "the operation of the telegraph between this city and Baltimore has not satisfied me that, under any rate of postages that can be adopted, its revenues can be made equal to its expenditures."<sup>15</sup>

While serving in Congress two years earlier, Johnson had ridiculed Morse's proposal for an electromagnetic telegraph, equating it to the "science of Mesmerism" and joking that if Congress was going to fund Morse's

<sup>8</sup> "Morse's Magnetic Telegraph," *Niles' National Register*, June 22, 1844, 262. *AAS Historical Periodicals Collection*, <http://search.ebscohost.com> (accessed April 3, 2015).

<sup>9</sup> "Morse's Electro-Magnetic Telegraph," *Commercial Review*, February 1, 1846, 134. *AAS Historical Periodicals Collection*, <http://search.ebscohost.com> (accessed April 3, 2015).

<sup>10</sup> 5 Stat. 757.

<sup>11</sup> *Annual Report of the Postmaster General*, 1845, 892.

<sup>12</sup> *Ibid.* Penny postmen were letter carriers who delivered mail in certain cities from the Post Office directly to addressees, for a one- or two-cent fee per letter, prior to the establishment of free city delivery in 1863.

<sup>13</sup> On October 29, 1846, Johnson stated that he had ordered the fees set at: 10 cents for up to 10 words, and 5 additional cents for every additional 10 words, with newspaper reporters charged half the going rate for every 100 words after the first 100 (letter of October 29, 1846, to Alfred Vail, in National Archives and Records Administration, Record Group 28, *Records of the Post Office Department*, "Records of the Chief Clerk, Electromagnetic Telegraph: 1837–1846, 1910," Box 1).

<sup>14</sup> James D. Reid, *The Telegraph in America and Morse Memorial* (New York, NY: John Polhemus, 1886), 107–108. Google Books, <http://books.google.com> (accessed April 1, 2015).

<sup>15</sup> *Annual Report of the Postmaster General*, 1845, 861.

experiment, it might as well appropriate money for mesmeric experiments.<sup>16</sup> But after witnessing the operation of the telegraph system, he changed his tune. Despite his belief that the telegraph would never be profitable, Johnson thought its value was beyond measure. At the end of 1845, he reported to President James Polk that the telegraph was "an agent vastly superior to any other ever devised by the genius of man for the diffusion of intelligence." He warned that "in the hands of individuals or associations, the telegraph may become the most potent instrument the world ever knew to effect sudden and large speculations — to rob the many of their just advantages, and concentrate them upon the few."<sup>17</sup>

## Formation of Private Telegraph Companies

Although Morse had hoped that the government would purchase his patent rights to the telegraph and extend service from Baltimore to New York, Congress was reluctant to fund further development of telegraph lines, given their cost and lack of profitability. So Morse and his associates formed a company, raised capital, and built lines at their own expense. Morse also licensed others to build telegraph lines, connecting other cities.<sup>18</sup> By the end of 1846, telegraph lines connected Washington and New York City, with other lines stretching as far as Buffalo, Boston, and Pittsburgh.

In his December 1846 annual report to President Polk, Postmaster General Johnson was even more emphatic in recommending government ownership or regulation of the telegraph lines. Not only did he believe that the public interest and safety demanded it, he thought that the Post Office Department would be "superseded in much of its most important business in a few years, if the telegraph be permitted to remain under the control of individuals."<sup>19</sup>

Unlike Johnson, Congress wanted out of the telegraph business. In June 1846, Congress had appropriated an additional \$4,000 for the operation of the Washington–Baltimore line, and had simultaneously authorized the Postmaster General to lease or sell it.<sup>20</sup> By the end of the year, the money was running out. Realizing that the government would no longer fund the operation of the Washington–Baltimore line, Alfred Vail and Henry J. Rogers, its operators, proposed to the Postmaster General that they continue to operate the line in exchange for the profits, at no expense to the government. On November 16, 1846, Johnson ordered that they be permitted to do so from December 1, 1846, to March 4, 1847. Since Congress failed to renew funding for the telegraph before adjourning on March 3, Johnson made the same arrangement with the Magnetic Telegraph Company on April 12, 1847 — leasing the line to the company at no cost, provided they operate it at no charge to the government.

In the next few years, telegraph lines crisscrossed the nation. By 1852, some businessmen on Wall Street were sending nearly as many telegrams as letters. Telegrams were reserved for only the most urgent messages, since sending 10 words by telegraph from New York to Washington cost 55 cents, while sending a letter the same distance cost only 3 cents.<sup>21</sup>

After the Civil War, the Western Union Telegraph Company came to dominate the telegraph industry, and fears of exorbitant profits and price gouging sparked recurring public debates about the benefits of government ownership of the industry. But telegraphs remained in the private sector except for a brief period during World War I, when President Woodrow Wilson placed both the telegraph and telephone industries under the control of the Postmaster General.<sup>22</sup>

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<sup>16</sup> *Congressional Globe*, 27<sup>th</sup> Congress, 3<sup>rd</sup> Session, 323 (February 28, 1843). Mesmerists claimed to heal the sick by manipulating "mesmeric forces" — magnetic fields, fluids, or "life forces." Many people thought they were quacks.

<sup>17</sup> *Annual Report of the Postmaster General*, 1845, 861.

<sup>18</sup> The first license agreements contained a provision that the rights to the telegraph were subject to purchase by the U.S. Government until March 3, 1847, after which time "the rights of all those who now engage in the enterprise, will become absolute, and not to be divested without their consent." ("Morse's Magnetic Telegraph," *Vermont Family Visitor*, August 1, 1845, 27, *AAS Historical Periodicals Collection*, <http://search.ebscohost.com>, accessed April 3, 2015.)

<sup>19</sup> *Annual Report of the Postmaster General*, 1846, 689.

<sup>20</sup> 9 Stat. 19.

<sup>21</sup> Alexander Jones, *Historical Sketch of the Electric Telegraph: Including its Rise and Progress in the United States* (New York, NY: George P. Putnam, 1852), 109-110. Google Books, <http://books.google.com> (March 31, 2015).

<sup>22</sup> Telegraph service was under the direction of Postmaster General Albert Burleson from August 1, 1918, to July 31, 1919. To ensure continuity of service, Burleson ordered telegraph companies to operate as usual.