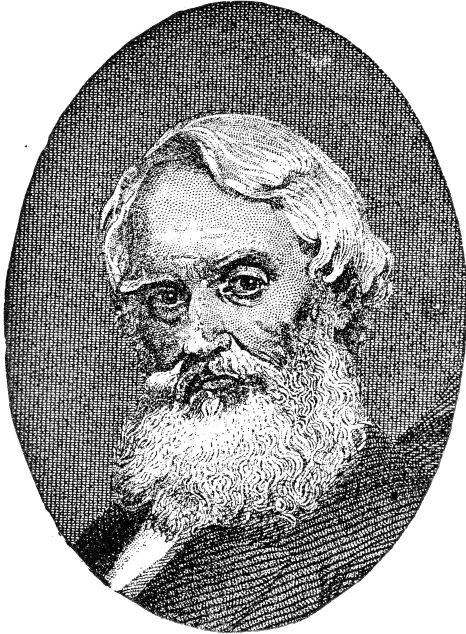


Hello, World

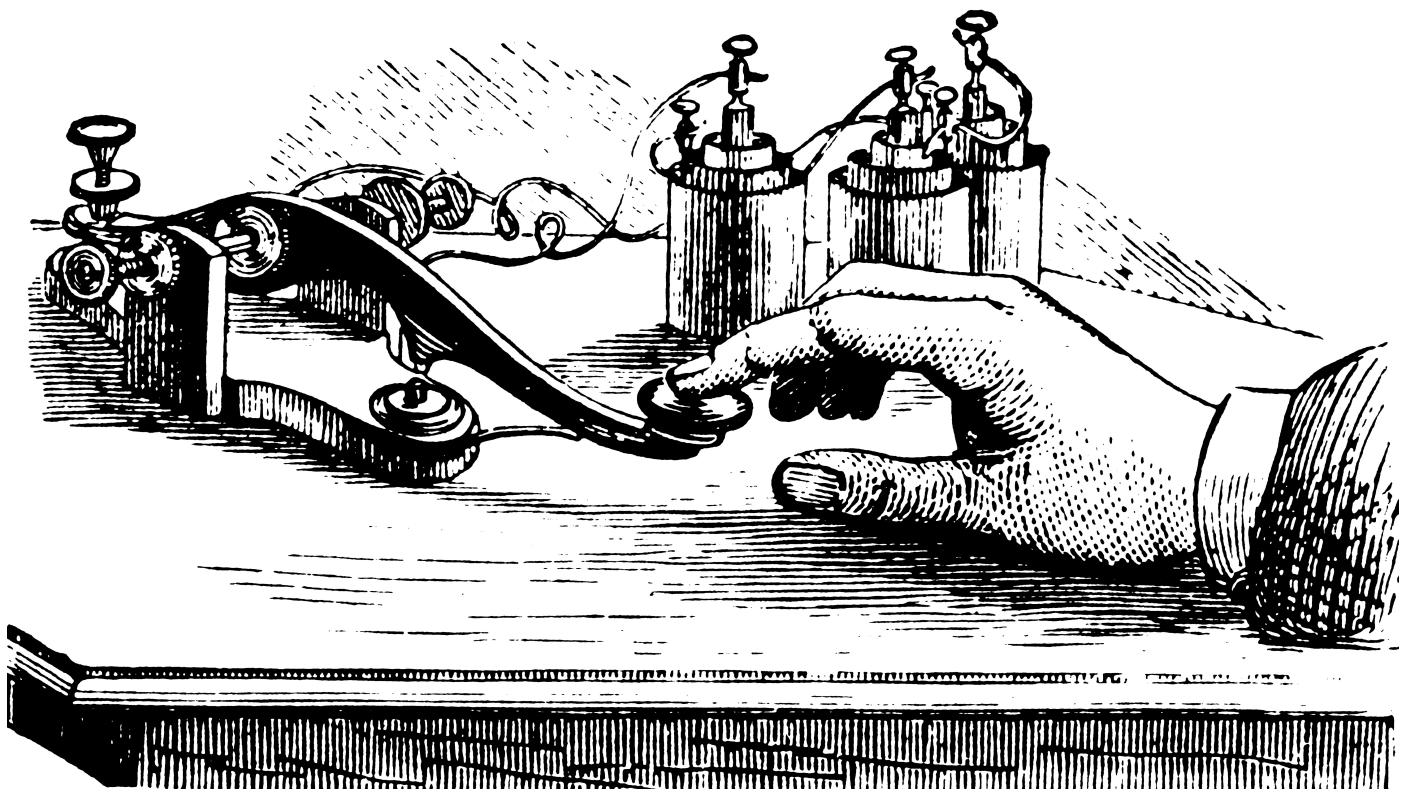


—• •—• by Nancy Galloway and Kirk W. House



- 1 “What hath God wrought.”
- 2 Sent by Samuel F. B. Morse on May 24, 1844, these words changed the course of history. What was so unique about his message? Samuel sent it from Baltimore, Maryland, to his partner, who received it only minutes later in Washington, DC—some 40 miles away. In an age before telephones and the internet, when letters were really the only form of communication, this was remarkable indeed. Samuel had invented the telegraph.
- 3 Samuel didn’t start out to be an inventor. His first ambition was to be an artist. But invention was an interest that occupied a lot of his time. Historians have often compared him to Italian inventor and artist Leonardo da Vinci because his skills as an artist allowed him to sketch his ideas for inventions.
- 4 It was on a return voyage from Europe to the United States in November 1832 that Samuel became interested in the telegraph. A conversation aboard the ship had centered on a new signaling device based on electromagnetism. Samuel was intrigued by the idea of sending messages over long distances by wire and began designing his own device. A British team launched a commercial telegraph system before Samuel completed his invention, but its signaling system used multiple wires and was good for only short-distance communication. It proved to be inferior to Samuel’s single-wire system and unique code.
- 5 Samuel’s device used pulses of current to deflect an electromagnet. This movement caused a marker to produce indentations—a series of dots and dashes to stand for letters, numbers, and special characters—on a strip of paper. Heard on the receiving end, these electrical bursts came through as distinct clicks. This invention became known as Morse code. Over the next 12 years, Samuel continued to work on the telegraph. Finally, in 1844, after his demonstration in Washington, DC, he became world-famous.
- 6 By the fall of 1861, the first telegraph lines reached across the plains of the United States. Before the start of the new year, a line was opened through the Sierra Nevada. The telegraph let people send in minutes messages that had taken weeks for the riders of the Pony Express to transport. And the telegraph laid the groundwork for other inventions, such as the telephone.

- 7 Although the telegraph offered a reliable and efficient way to flash information across the United States, it was not user-friendly. Specially trained operators had to tap out and then read Samuel's code at top speed. The party at either end of the telegraph line needed an operator and letter-by-letter transmission to get messages sent and delivered. Because messages could not travel long distances, they had to be repeated at various telegraph offices between the two end points. Lastly, only one message at a time could cross the wires.
- 8 Alexander Graham Bell changed all that in 1876 when he invented the harmonic telegraph. This concept led to the development of transmitting the human voice. Then Alexander and his colleague Thomas Watson worked for two years to make one of the first direct-voice messages in history. The message traveled only from room to room, but Alexander's simple sentence ("Mr. Watson—come here—I want to see you") changed communications forever.
- 9 After carefully securing patent protection in 1876, Alexander unveiled the telephone at the Centennial Exposition in Philadelphia, Pennsylvania. Within five years, Alexander's company had installed more than 130,000 telephones in homes and businesses. By 1900, a quarter of a million phones were ringing across America, and wires crowded the country's skies.
- 10 Through the inventions of the telegraph and the telephone, news and information reached more people at a faster and less expensive rate. These two new methods of long-distance communication left the Pony Express's record of ten days in the dust. By the end of the 19th century, Americans were on an information and communication superhighway. That journey continues today, thanks to cell phones, email, and the internet.



Hello, World

Test Questions

Circle the correct answer.

1. This question has two parts. Answer Part A first, and then answer Part B.

Part A: What are two main ideas covered in the article by Nancy Galloway and Kirk W. House?

- a. The invention of the telegraph opened the door for even more sophisticated communication technology to emerge.
- b. The invention of Morse code had little effect on the way people communicated with one another.
- c. Telegraphs were quicker and more helpful ways of communicating, but they were not perfect.
- d. Samuel F. B. Morse's invention of the telegraph happened by accident because he never wanted to be an inventor.
- e. The invention of the telegraph wasn't remarkable because it caused confusion and chaos for its users worldwide.

Part B: Which two sentences from the text best support your answer to Part A?

- a. Samuel didn't start out to be an inventor.
- b. The message traveled only from room to room, but Alexander's simple sentence ("Mr. Watson—come here—I want to see you") changed communications forever.
- c. Lastly, only one message at a time could cross the wires.
- d. And the telegraph laid the groundwork for other inventions, such as the telephone.
- e. Historians have often compared him to Italian inventor and artist Leonardo da Vinci because his skills as an artist allowed him to sketch his ideas for inventions.

2. Select two details from the text that help show the significance of Samuel Morse's invention.

- a. Historians have often compared him to Italian inventor and artist Leonardo da Vinci because his skills as an artist allowed him to sketch his ideas for inventions.
- b. Samuel sent it from Baltimore, Maryland, to his partner, who received it only minutes later in Washington, DC—some 40 miles away.
- c. The telegraph let people send in minutes messages that had taken weeks for the riders of the Pony Express to transport.
- d. Then Alexander and his colleague Thomas Watson worked for two years to make one of the first direct-voice messages in history.
- e. Through the inventions of the telegraph and the telephone, news and information reached more people at a faster and less expensive rate.

Hello, World

Test Questions (*continued*)

3. What is the best meaning for the word *intrigued* as it is used in paragraph 4?

- a. irritated
- b. suspicious
- c. sympathetic
- d. captivated

4. What caused Samuel Morse's interest in the telegraph?

- a. He wanted to be able to send messages over short distances.
- b. He wanted to be the first to design an electromagnetic system.
- c. He wanted to be an artist like Leonardo da Vinci.
- d. He wanted to be able to communicate over long distances.

5. This question has two parts. Answer Part A first, and then answer Part B.

Part A: What is the overall text structure in "Hello, World"?

- a. Cause-Effect
- b. Description
- c. Chronological
- d. Problem/Solution

Part B: Select two sentences from the text that provide the best evidence to support your answer choice for Part A.

- a. But invention was an interest that occupied a lot of his time.
- b. Because messages could not travel long distances, they had to be repeated at various telegraph offices between the two end points.
- c. That journey continues today, thanks to cell phones, email, and the internet.
- d. This movement caused a marker to produce indentations—a series of dots and dashes to stand for letters, numbers, and special characters—on a strip of paper.
- e. It was on a return voyage from Europe to the United States in November 1832 that Samuel became interested in the telegraph.