

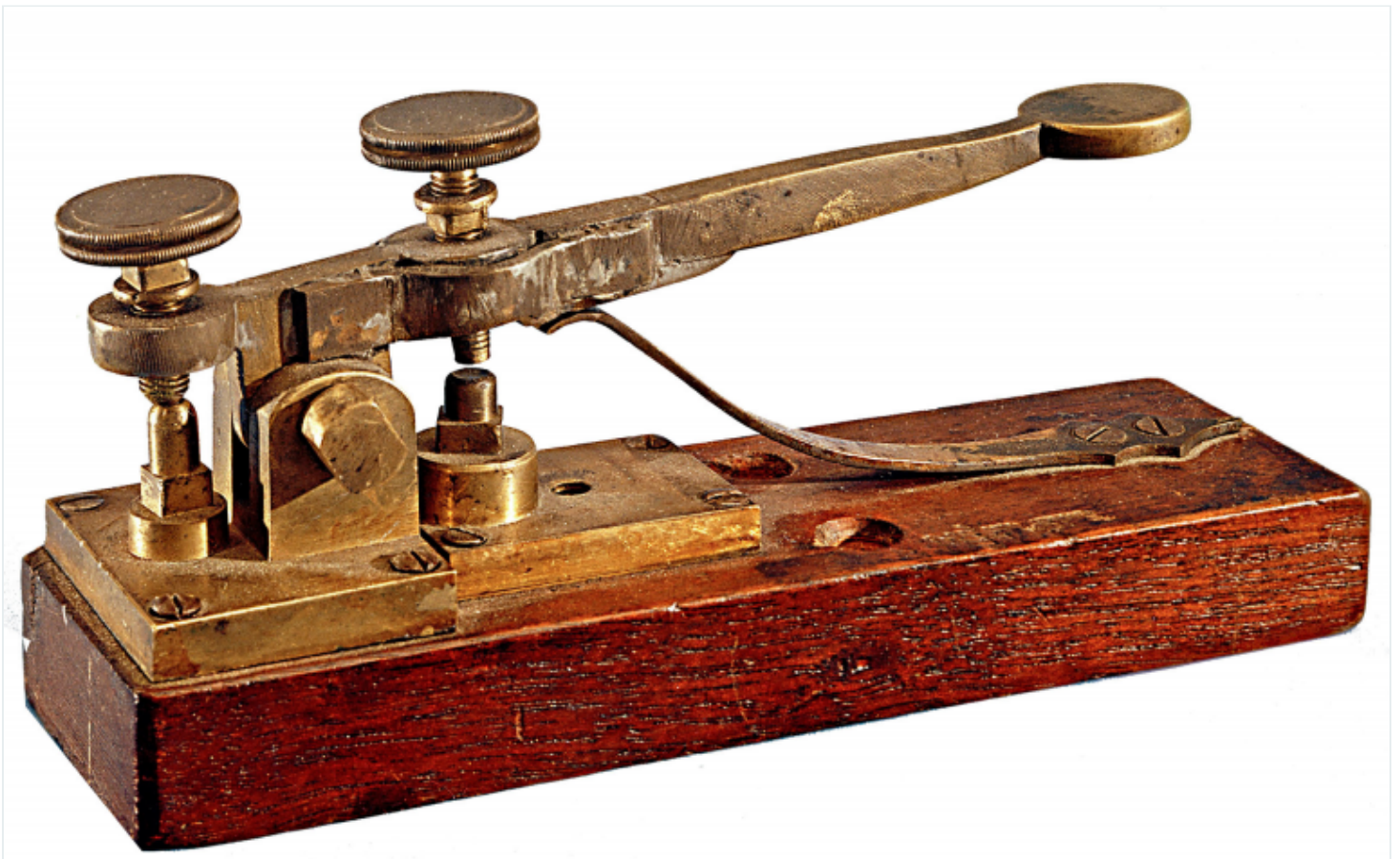
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## Telegraph

Wires, direct deposits, and electronic funds transfers (EFT) have roots in the invention of the telegraph; a tool used in the United States from 1844 until 2013 (some areas of the world still communicate by telegram today).

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Those of us in dynamic, fast-paced industries have gotten used to keeping our eyes trained forward. We're always exploring innovations—ways to evolve our processes and make them as efficient as possible. Technology grows at such break-neck speed that adults of any age can look back and marvel at the changes they've witnessed in their lifetimes. But surprisingly, many of these technologies aren't actually new. In

fact, most of our modern financial workflows have evolved from processes that are

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The telegraph is the catalyst for all modern means of communication. It's arguably one of the most pivotal inventions of Anno Domini, and it forever changed the speed at which critical information could circulate in and among developed countries. Instead of waiting weeks for mail to arrive by ship, train, and pony express, messages would take only hours to arrive. It was as pivotal to its contemporaries as the Internet is to us.

The invention of the telegraph came just after the first Industrial Revolution, in 1844, when Samuel Morse [sent the first telegram](#) from Washington, D.C. to his partner, Alfred Vail, in Baltimore, Maryland. The message: "What hath God wrought?"

Just over a decade later, preparations began to lay the Transatlantic Telegraph Cable across the seafloor—but the project took several years to complete. The first two attempts failed after the cable—[made of copper wire wrapped in tar, hemp, and steel](#)—snapped and was lost irretrievably lost at sea. The third attempt, completed in 1858, finally connected the two continents from Newfoundland, Canada, to Valentia Island in Ireland.

After a test message ("Glory to God in the highest; on earth peace, good-will towards men!") successfully transmitted between the engineers, Queen Victoria and President Buchanan exchanged [lengthy congratulations](#). The Queen's message—the less flowery of the two, comprised of 99 words with 509 letters—took an exhausting 17 hours and 40 minutes to transmit by Morse code. This may seem lengthy by today's standards, but at the time, the fastest means of overseas communication was by ship. Eighteen hours was staggeringly fast.

Success was short-lived. The power used to send the first messages was too much for the cable to withstand, and it corroded and fell silent within the first three months.

Intercontinental silence ensued until 1866—two years after the American Civil War

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- Sending a ten-word message in 1860 from New York to New Orleans cost \$2.70—about \$76 in 2018.
- Sending a ten-word message to England around the opening of the Transatlantic Telegraphic Cable would have cost around \$100—just over \$2,930 in 2018.

Because the prices were out of reach for most middle- and lower-class families of the day, physical mail remained the primary means of communication. This resonates with today's concerns about the potential expense of newer technologies. The inventions of the telephone and the radio also likely contributed to the telegraph never becoming a common household item. Even so, it still had more to give to society—businesses found another use for this groundbreaking technology.

## Incorporating the Telegraph into Bank Processes

The first funds moved via wire in 1872 when the Western Union opened a system to transfer up to \$100 (about \$2,120 in 2018) at a time. According to Tom Standage in his book *The Victorian Internet*: “The system worked by dividing the company's network into twenty districts [...]. A telegram from the sender's office [...] confirmed that the money had been deposited; the superintendent would then send another telegram to the recipient's office authorizing the payment.”

This was a rudimentary, time-consuming process, but still similar to **modern operations**. It took a while for the concept of non-physical fund exchanges to catch on. Standage writes: “One [person] went into a telegraph office to wire the sum of \$11.76 to someone and then changed the amount to \$12 because [they] said [they were] afraid that the loose change ‘might get lost traveling over the wire.’”

## Stepping into the Modern Age

The transition from telegraphic methods to EFT is somewhat obscured. The first

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## Sound familiar?

When reading through old articles about initial EFT processes, I was struck by how many of the same arguments exist today against switching entirely to electronic procedures.

In Cook's article, she broke down the cost for banks to maintain physical processes at the time. Banks were processing around 27 billion checks annually for 32 cents a check (\$1.45 in 2019). They stressed that EFT was crucial to sustaining their businesses.

A separate [1977 article](#) by Sylvia Porter in The Southeast Missourian entitled "Checkless society," discussed her concerns about EFT payments. Some of the concerns are very dated. For example, Porter argued that disputes over electronic transactions at restaurants would require lawsuits to resolve. These days, banks frequently handle disputes on behalf of their clients and refund them up front. Other arguments, such as the value of float for companies, remain valid today [and are resolved by fintechs](#).

## Same Song, Different Decade

It's the 21<sup>st</sup> century, and electronic payment options are already aging—wire transfers are almost 150 years old! Yet companies still struggle to get fully automated processes off the ground. Where is the disconnect?

There are several possible contributors, which include:

- **Perceived cost**. Sending funds electronically is cheaper than ever, but checks now cost around \$3.00 each. This equates to roughly 65 cents in 1976—a 106% increase from the original 32 cents (without even accounting for inflation). Despite the

reduced cost of electronic payments, the transition, training, and scaling concerns

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company handles all transactions through Nvoicepay, which enable AP teams to issue payments electronically. Then Nvoicepay disburses the funds in the vendor's preferred format (credit card, ACH, or print check) without you having to chase down a single check-signer.

- **Security concerns.** Payment fraud instances are more common than ever. Handing some control to a payment partner can be intimidating, especially if you're not sure that partner is taking fully protective measures for your company. During the research process, be sure to ask prospective payment solution providers whether they will cover you for any issues that occur.

## Looking Forward

What can we learn by looking back? Aside from gaining a healthy appreciation for our roots, reflection offers a great perspective on the future of **modern AP processes**. It highlights the fact that we haven't changed all that much. Rather than introduce new concepts these past 150 years, we have refined and modernized existing operations.

If you're researching ways to economize your back-office processes, but all the new-fangled technology sets you on edge, take heart! You may be surprised at how familiar this new technology feels because it isn't really new at all—it's evolved.

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