

*THE MINISTRY OF THE REPUBLIC OF UZBEKISTAN AND  
SECONDARY EDUCATION*

**ANDIJAN MACHINE-BUILDING INSTITUTE**

*THE CHAIR OF LANGUAGES*

# **INDEPENDENT WORK**

Theme: «Telegraph»

Faculty: Automation and electro technology

Direction: TPAM

Course: 3

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## *ANDIJAN - 2015*

Text: Telegraph

Benjamin Franklin, an American who is famous for his interesting and useful inventions, published his ideas about electricity in 1752. Scientists in many countries became interested in this wonderful form of energy. They wanted to find the answer to a very important question : could the electricity be used to develop a fast, efficient system of long-distance communication? Experiments proved that electricity could travel instantly over a very long piece of wire. But a note that was written on a piece of paper couldn't be put into a wire. How could electricity be used to send a message? A Danish scientist discovered that electricity could move a needle from left to right and that the needle could be pointed at letters on a piece of paper. Then a German government worker made up a code system that could be used with an electric needle. In 1837 two English scientists sent a message by electric telegraph for a distance of more than 1.6 kilometers.

Samuel Morse, an American portrait painter, was experimenting with an electric telegraph too. At first he connected a pencil to an electric wire. When the electricity came through the wire the pencil made wavy lines. Then Morse invented a code that used dots and dashes for the letters of the alphabet. Finally, he discovered that telegraph messages did not have to be written, they could be sent in sound.

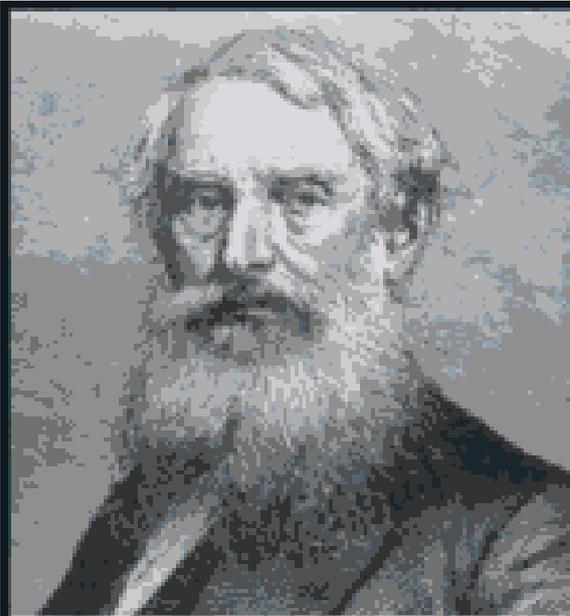
On May 24, 1844, the first long-distance message was sent by telegraph for 64 kilometers.

Telegraph companies were formed in many cities. By 1861 telegraph wires stretched from the Atlantic to the Pacific. In Europe too, Samuel Morse's system became popular.

But telegraph wires couldn't be hung over an ocean. Messages to and from Europe had to be sent by ship – a journey of two or three weeks. A new method was needed.

The Atlantic telegraph Company which was organized in 1856 wanted to try to lay a cable on the floor of the Atlantic Ocean. The 4 000-kilometer cable broke three times. Each time a new cable had to be made. Finally, on July 27, 1866, the first transatlantic message was sent from Newfoundland to Ireland.

Later cables were laid to Central and South America. After 1900 transpacific cables were laid to Asia and Australia. At last news and business information could be sent instantly to almost every country in the world.



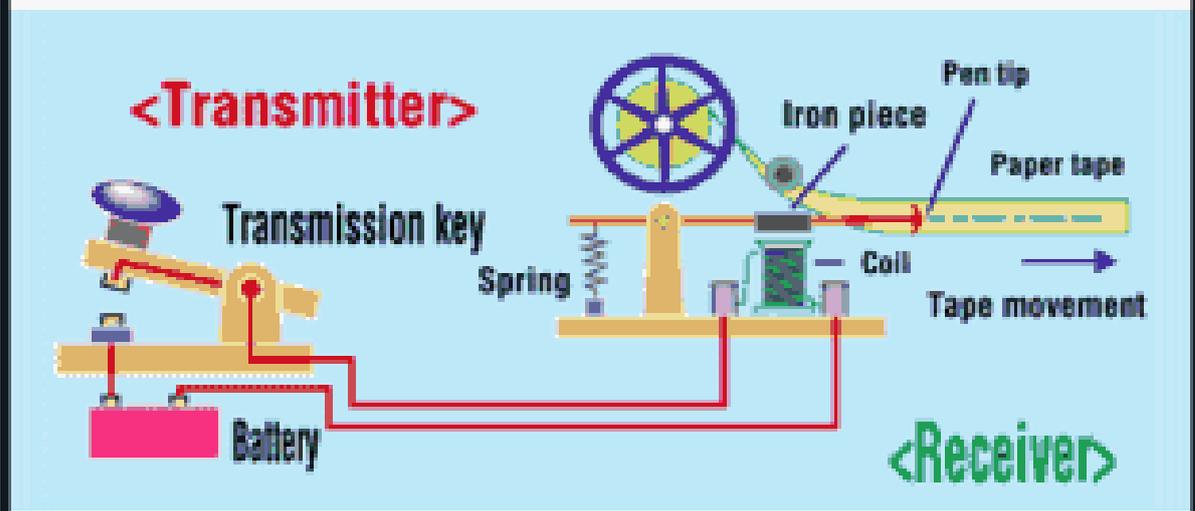
**Prof. Samuel Finley Breese Morse**

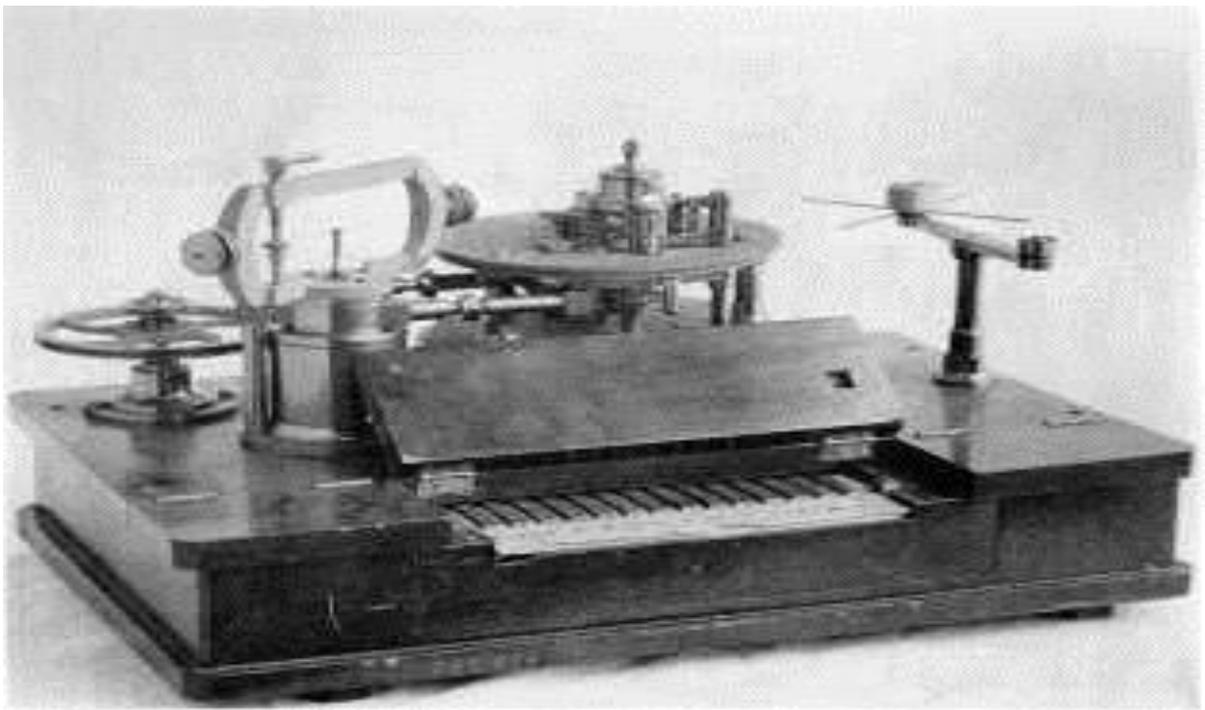
**Born April 27, 1791**

**Died April 2, 1872**

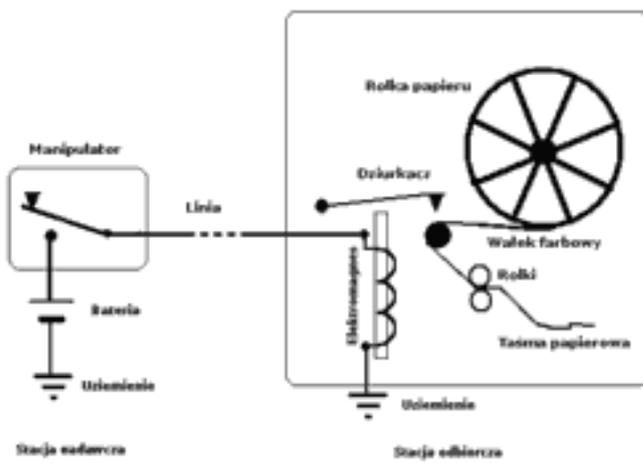
Morse developed 'lightning wires' and 'Morse code,' an electronic alphabet that could carry messages. The patent No. 1,647 was applied for in 1840. A line was constructed between Baltimore and Washington and the first message, sent on May 24, 1844, was

**"WHAT HATH GOD WROUGHT"**





(Photograph courtesy of Smithsonian Institution, Washington, D.C.)  
**1943 PATENT OFFICE MODEL OF HOUSE'S PRINTING TELEGRAPH**



## Telegraf

Berjamin Franklin o'zining qiziqarli va foydali ixtirolari bilan mashxur Amerikalik, 1752-yilda o'zining elektr xaqidagi fikrlarini nashr qildi. Ko'plab mamlakatlardagi olimlar energiyaning bu ajoyib shakliga qiziqib qolishdi. Ular juda muxim bir savolga javob topishni xoxlashardi : elektrdan uzoq masofadan aloqa qilishning tez, samarali tizimini rivojlantirish uchun foydalanish mumkinmi? Tajribalar shuni korsatdiki, elektr simning uzun bolagi orqali oz muddatga harakatlanishi mumkin. Lekin, qog'oz bolagiga yozilgan yozuvni simning ichiga qoyib bolmasdi. Qanday qilib elektrdan xabar yuborish uchun foydalanish mumkin? Daniyalik bir olim elektr ignani chapdan o'ngga harakatlantirishi mumkinligini va bu igna qog'ozga harflar yozishi mumkinligini kashf qildi. Keyin Germaniya xukumatining bir ishchisi elektr igna yordamida ishlaydigan kod tizimini o'ylab topdi. 1837-yilda ikki ingliz olimlari 1.6 km dan olisroq masofaga elektr telegraf yordamida xabar yuborishdi.

Samuel Morse, Amerikalik portret rassomi ham elektr telegraf bilan tajribalar o'tkazgan. Dastlab, u elektr simni qalam bilan bog'ladi. Simdan elektr o'tganda, qalam tugmasimon chiziqlar chizadi. Keyin Morse alfavitidagi harflarni yozish uchun nuqta va tirelardan foydalaniladigan kodni ixtiro qildi.

1844-yil 24-mayda ilk bor 64 km uzoqlikka telegraf orqali xabar jo'natildi.

Ko'plab shaxarlarda telegraf kompaniyalari tashkil etildi. 1861-yilgacha telegraf simlari atlantikadan Tinch okeanigacha cho'zildi. Yevropada ham Morse tizimi mashxur bo'lib ketdi.

Lekin telegraf simlarini okean ustidan olib o'tib bolmasdi. Yevropaga yoki Yevropadan jo'natilayotgan xabarlarini kemada ikki yoki uch haftalik vaqtda jo'natish kerak edi. Yangi metod zarur edi.

1856-yilda tashkil etilgan Atlantika telegraf kompaniyasi kabelni Atlantika okeani ustidan o'tkazmoqchi boldi. 4 000 km uzunlikdagi kabel 3 marta uzilib ketdi. Har safar yangi kabel yasashga to'g'ri keldi. Va nihoyat, 1866-yil 27-iyulda Newfoundlanddan Irlandiyaga dastlabki Atlantika orqali xabar jo'ntildi.

Keyinroq, kabellar Markaziy va Janubiy Amerikagacha yetib bordi. Keyin Tinch okeani orqali 1900 ta kabel Osiyo va Avstraliyaga tortildi. Oxir oqibat, yangiliklar va biznes ma'lumotlarini dunyoning deyarli barcha mamlakatlariga qisqa muddatda yetkazish imkoni paydo boldi.