



# Communications Technology

## Early Electronic Communication

The era of electronic communications began in the early 18th century with the invention and development of the **telegraph**. The first telegraph systems transmitted visible signals from tower to tower using flags and a system of codes. Soon, developments in electromagnetic technology allowed signals to be transmitted over wire, and electric telegraphs came into use. Electric telegraphs were used for communications on the newly developing railways, to coordinate movements of trains and avoid collisions. Telegraph wire was added to many railway lines, and telegraphs soon became a fast, convenient way for people to communicate across great distances. In the 1870s,



The electric telephone

inventors transformed speech into electrical signals that could be sent along wires, forming the first telephones. This freed communications from short, coded telegraph messages to allow for direct, speech-based communication and discussion in real time. Telephones greatly enhanced communications between people across great distances. Soon thereafter, in the 1890s, inventors developed technologies to send communications signals by electromagnetic radiation. This freed communications from having to travel along wires, and set the stage for a revolution in electronic communications.



**What is an electric telegraph?**

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## Modern Electronic Communication

The development of wireless transmission of information allowed for the development of radio and television. Technologies for recording and transmitting sound and light enabled television and radio programs to be delivered to people across great distances. Because these technologies developed in Western countries, the programs transmitted Western languages and cultural ideas, which quickly spread around the world. In the 21st century, technology for **digitizing** information, or converting it to numerical code, allowed for even more rapid and comprehensive forms of communication, such as the internet and cellular phones.