



HISTORY OF TELECOMMUNICATION

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History of Telecommunication

Telecommunication is the transmission of signs signal,message,words,writing,images and sounds or information of any nature by wire,radio,optical or electromagnetic systems.We've come a long way from smoke signals and drums, the earliest forms of telecommunication. Today's telecommunication industry uses electromagnetic waves and electronic transmitters to connect people. Connections are still made by sight or hearing, but telephone, television, radio, computers and satellites now allow the message to travel around the world, even out into space, and to be received almost instantly.

Did the men who invented modern telecommunications Alexander Graham Bell (telephone), Guglielmo Marconi (radio), John Logie Baird (television) – realize how profoundly they would change the world? Today, the telecommunication industry is a significant factor in world economy, generating 3% of the gross world product. Figures for 2006 place industry revenue at \$1.2 trillion and rising.

Highlights in telecommunication history in,

Prelude

- **1200 BC**-Homer talks about signal fires in the Illiad.
- **700 BC to 300 AD** - Carrier pigeons used in Olympic games
- **1588 AD** - Arrival of the Spanish Armada announced by signal fires voice telegraphs used hundreds of years BC through the middle ages and in the Canary Islands today.
- **1800 AD** - A line of canon from Buffalo to NYC used to announce goverment. DeWitt Clinton's inaugural trip through the Erie Canal. It took 80 minutes.

Early beginnings

- **1791** - The Chappe brothers, in France, were in their teens and were going to schools some distance apart but visible to each other. They obtained permission to set up a signaling system so they could send messages to each other.
- **1793** - The Chappe brothers established the first commercial semaphore system between two locations near Paris.
- **1837** - Cooke and Wheatstone obtain a patent on telegraph. Morse publicly demonstrates his telegraph.
- **1844** - Morse demonstrates the electric telegraph.
- **1865** - Maxwell mathematically predicts the propagation of electromagnetic waves through space.
- **1866** - First transatlantic telegraph line successfully laid. Prior to the cable, sending messages between the United States and Europe took 11 days.
- **1875 (June 2)** - Bell's theory of the telephone confirmed by experiment.
- **1875** - First words transmitted by telephone.

The Telephone

- **1876** - Alexander Graham Bell invents the telephone.
- **1876**- Telephones: The year 1876 was a big one for Alexander Graham Bell. Having come to the U.S. as a teacher for the deaf, he had been trying to figure out a way to transmit speech electronically. Despite little support from his friends, he successfully invented the telephone in March of 1876.
- **1876 (March 10)** - First complete sentence of speech transmitted by telephone in Boston.
- **1877** - Western Union has first telephone line in operation between Somerville, MA and Boston.
- **1888** - Heinrich Hertz produces radio waves.
- **1889**- Gray (USA) Installation of first payphone for coins in bank in Hartford at Connecticut (USA) by patented idea of William Gray.
- **1890** -Introduction to receiver ring-shaped magnet.
- **1892 (October 18)** - Opening of long distance telephone service, New York to Chicago, 950 miles.
- **1895** - Guglielmo Marconi invented the radio.
- **1896** - Marconi patents wireless telegraph.
- **1901** - Marconi transmits first trans-Atlantic radio message.
- **1901** - Guglielmo Marconi sends first transatlantic wireless signals, 12 December.
- **1902** - First conversation by long distance underground cable, 10 miles - New York to Newark.
- **1905** - Marconi patents his directive horizontal antenna.
- **1906** - Lee deForest invents the vacuum tube.
- **1907** - The world's first transatlantic commercial wireless services is established by Marconi with stations at Clifden, Ireland and Glace Bay, Nova Scotia.
- **1914** - Underground cables link Boston, NYC and Washington.
- **1915 (January 25)** - Opening of First Trans-continental telephone line, New York to San Francisco, 3600 miles.
- **1915** - Direct telephone communications opened for service at 4pm, EST. Alexander Graham Bell, in New York.
- **1920 (July 16)** - World's first radiotelephone service, between Los Angeles and Santa Catalina Island, opened to the public.
- **1920** - The first regular commercial radio broadcasts begin when AM station.
- **1921** – Wire photo - The first electronically-transmitted photograph is sent by Western Union.
- **1926** - Baird in Scotland and Jenkins in the U.S. demonstrate TV using neon bulbs and mechanical scanning disks. P.M. Rainey at Western Electric patents the PCM methodology.

Television

- **1927**-Television: Phillip T. Farnsworth made media history on September 7, 1927, when he demonstrated the first working television set. He had been working on a method to transmit images: What he discovered was that you could encode radio waves with an image and then project them back onto the screen. This gave us the first television prototype.
- **1927** - First public demonstration of long distance transmission of television.
- **1935** - First telephone call around the world. About 6700 telcos in operation.
- **1935 (April 25)** - First around-the-world telephone conversation by wire and radio.
- **1936** - BBC begins regular television service.
- **1941**- Konrad Zuse in Germany develops the first programmable calculator using binary numbers and boolean logic.
- **1945** - Western Union installs the first commercial radio beam system.
- **1946** - Mobile telephone service is placed into commercial use in St. Louis, Missouri.
- **1953** - John Pierce proposes deep space communication.
- **1954** - US Air Force's SAGE system sets precedent for computer communications, including use of modems.

Satellite

- **1957** - October 4, the Russians launched the first satellite, Sputnik.
- **1960** - ECHO I communications satellite is launched on 12 August. Provides first satellite television broadcast of 1962. Laser is invented.
- **1962**-Commercial telecommunications satellite: The Communications Satellite Act was officially passed in 1962, allowing telecommunications to finally go into space. AT&T was in the process of constructing their satellites, and two short years later, they would have put six telecommunications satellites into orbit.
- **1962** - United States Congress passes the Communications Satellite Act. T1 carrier is put into commercial service. The first transatlantic transmission of a TV signal via the TELSTAR satellite.
- **1964**- Fiber-optic telecommunications: In 1964, Charles Kao and George Hockham published a paper that proved that fiber-optic communication could be possible as long as the fibers used to transmit the information were free of impurities. This discovery reopened the door Alexander Graham Bell had first created with his photophone, allowing sound to be transmitted over beams of light.
- **1966** - Suggestions made by Kao and Hockham that optical fiber could be used for long distance transmission.
- **1968** - FCC starts proceeding to set aside spectrum for land mobile communications.
- **1969** -Computer networking: In October of 1969, the first data traveled between nodes of the Arpanet, a predecessor of the Internet. This was the first computer network and was invented by Charley Kline and Bill Duvall.
- **1971** - The Intelsat IV communications satellite goes into commercial operation.
- **1973**- First modern-era mobile phone: Inventor Martin Cooper placed the first cellular mobile call in 1973 to his rival at Bell Labs, Joel Engel. The first mobile phone had a maximum talk time of 30 minutes, and it took a year for the battery to recharge. The phone would eventually be a prototype for Motorola's first mobile phones.

- **1974** - First domestic satellites in operation.
- **1976** - Digital radio and time division switching introduced.
- **1977** - Voyager spacecraft is launched. Sends back signals from Jupiter (1979-1980), Saturn (1981), Uranus (1986) and Neptune (1989).
- **1980** - First use of the "900" number.
- **1981** - First cellular mobile telephone service is offered.
- **1981** - First mobile phone network: The first commercially automated cellular network was launched in Japan in 1981. The network was originally launched only in Tokyo in 1979 and then was expanded. Simultaneously, the Nordic Mobile Telephone system was also established in Denmark, Finland, Norway, and Sweden.
- **1983** - Internet: On January 1, 1983, the Internet was officially born. ARPANET officially switched its old network control protocols (NCP) and Transmission Control Protocol/Internet Protocol (TCP/IP) became standard.
- **1987** - Superconductivity is discovered - the transmission of electricity without resistance through low temperature material.

World Wide Web

- **1992** - The World Wide Web is born - the brain child of CERN physicist Tim Berners-Lee.
- **1998** - Mobile satellite hand-held phones: The first canoply of 64 satellites was put into place by a company called Iridium in 1998. They also produced the first hand-held satellite phones, which were smaller and less cumbersome than the earlier "bag" phones. This revolutionized mobile telecommunications and would lead to the modern smartphone.

Social Media

- **2003** – Myspace is launched.
- **2003** – Skype video calling software is launched.
- **2004** – What would become the largest social networking site in the world, Facebook is launched.
- **2005** – YouTube, the video sharing site, is launched.
- **2006** – Twitter is launched.
- **2007** – iPhone is launched.
- **2009** - Whatsapp is launched.
- **2010** – Instagram is launched. iPad is created.
- **2011** – Snapchat is launched.
- **2015** - Discord is launched.

This is the development of telecommunication.