

A complex network diagram with various sized nodes (black, blue, grey) connected by thin grey lines. Some nodes are highlighted with larger circles. The background is light grey with faint circular patterns.

SELAYANG PANDANG TELEKOMUNIKASI

Firdaus, S.T., M.T., Ph.D

WHAT IS TELECOMMUNICATION?

Telecommunication is the exchange of signs, signals, messages, words, writings, images and sounds or information of any nature by wire, radio, optical or other electromagnetic systems.



1

Before Electricity

1200 BC: Fire signals used at the siege of Troy

776 BC: First document use of pigeons, announcing the Olympian winner to the people of Athens

200 BC: Egypt and China use messengers on foot and on horseback, using relay stations

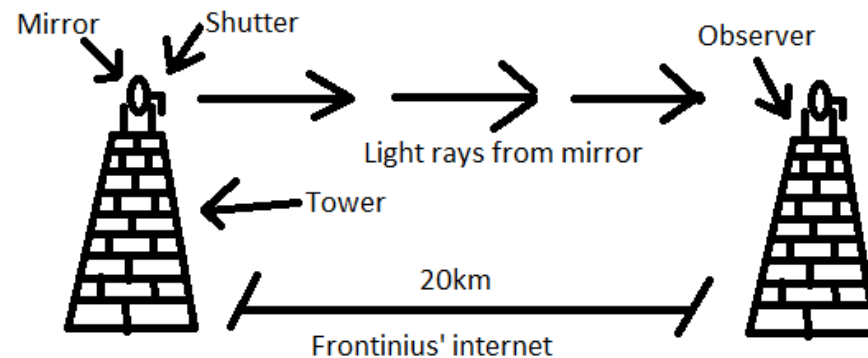
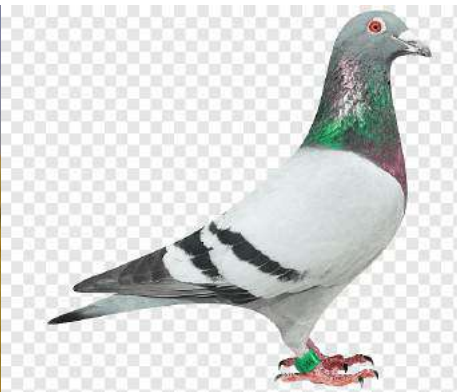
150 BC: Greek historian Polybus converts the Greek alphabet to numeric, enabling coded texts to be signaled

37 AD: Heliographs – Roman Emperor Tiberius uses mirrors to communicate with his empire

1608: Telescope invented, enabling ships at sea to use signal flags

1793: Mechanical semaphores on hilltop towers used by Claude Chappe in France

<https://www.telcomhistory.org/resources/telecom-history-timeline/>





2

1800-1900

1835: Joseph Henry invents first electric telegraph

1844: Using his new code, Samuel Morse sends the first telegraph message, "What hath God wrought?" between D.C. and Baltimore

1858: Construction of the first transatlantic telegraph cable completed

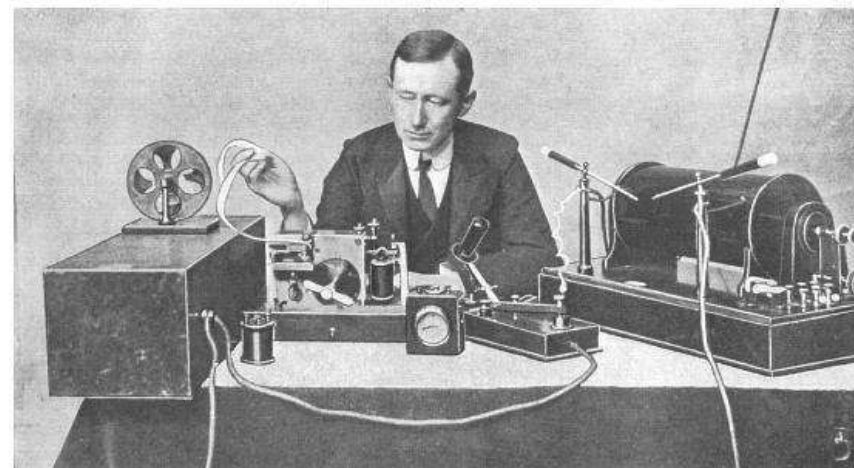
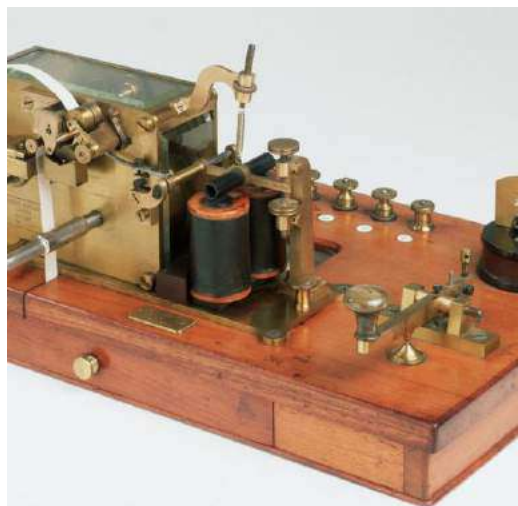
1876: Alexander Graham Bell patents the telephone

1881: First Yellow Pages published

1887: First coin-operated telephone installed in the Hartford Bank by the pay phone's inventor, William Gray

1889: Almon Strowger invents the first direct dial, bypassing the need for manual switching

1895: Italian inventor Guglielmo Marconi develops the first successful long-distance wireless telegraph, using radio waves



MARCONI READING A MESSAGE

3

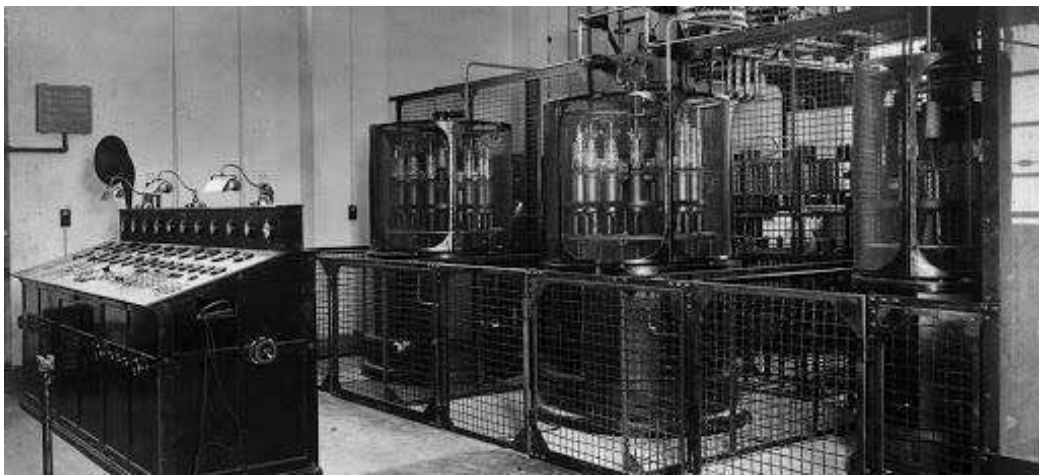
1900-1950

1915: The first "official" coast-to-coast call is made between A.G. Bell in New York to Thomas Watson in San Francisco

1927 Transatlantic telephone service inaugurated for commercial service (US to Britain), using radio telephony

1929: Herbert Hoover becomes the first president of the United States with a phone on his desk. Until this time, the president talked on a phone from a booth outside his executive office

1946: 250,000 women employed as switchboard operators for public service and businesses



4

1950-1970

1955: The laying of the first trans-Atlantic telephone cable

1957: Field tests for the first pagers begin in Allentown and Bethlehem, Pennsylvania

1958: Princess Phones are introduced, the first phone with a lighted dial, which became a part of American pop culture

1960: The first touch-tone telephones are test-marketed, which had 10 buttons, rather than the 12 buttons of today

1963: Hotline established between White House and Kremlin following the Cuban missile crisis

1968: 911 chosen as the nationwide emergency number. The nation's telephone companies agree to make this three-digit sequence unavailable as an exchange number



5

1970-2000

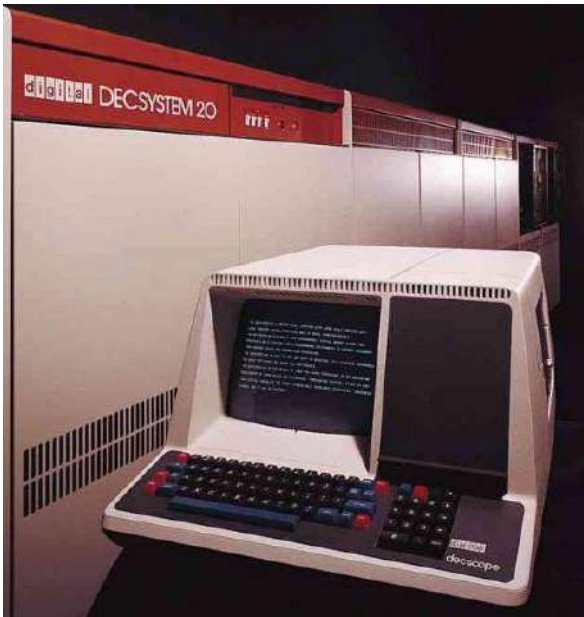
1971: Ray Tomlinson sends the first email to himself via ARPANET

1973: First non-car mobile phone, the DynaTAC is unveiled to the public

1989: The first flip phone is released, targeting wealthy consumers at a price of \$3,000 USD

1991: Caller ID introduced. Controversial at the time, Caller ID has become America's most popular add-on feature

1998: The World Wide Web is born, marking the beginning of the Internet as we know it today. Most Americans get Internet connections through their phone lines



6

2000 and Beyond

2000: The “Web Phone” combines a traditional telephone with an LCD touch-screen and a retractable keyboard to let customers surf the Internet, check e-mail, make phone calls and check voice mail from a single device

2000: The “Thin Phone” integrates wireless Internet access with local wireless phone service, allowing Internet customers to stay connected with everything from Web pages to voice and e-mail, all while on the move

2000 and beyond: “Information Appliances” make Internet mobile, wireless “Web to Go,” voice-activated dialing, phone numbers for life, phone calls and Internet on your TV, TV via wireless phones, and much more

