

The major events of telecommunication's history essay sample



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Telephone names from the Greek word “ tele”, meaning from afar, and “ phone”, meaning voice or voiced sound. Generally, a telephone is any device which conveys sound over a distance.

Telephone history begins at the start of human history. Man has always wanted to communicate from afar. People have used smoke signals, mirrors, jungle drums, carrier pigeons and semaphores to get a message from one point to another. But a phone was something new. Some say Francis Bacon predicted the telephone in 1627; however, his book *New Utopia* only described a long speaking tube. A real telephone could not be invented until the electrical age began. And even then it didn't seem desirable. The electrical principles needed to build a telephone were known in 1831 but it wasn't until 1854 that Bourseul suggested transmitting speech electrically. And it wasn't until 22 years later in 1876 that the idea became a reality. But before then, a telephone might have been impossible to form in one's consciousness.

In the 1870s, two inventors Elisha Gray and Alexander Graham Bell both independently designed devices that could transmit speech electrically. Thomas Watson fashioned the device itself; a crude thing made of a wooden stand, a funnel, a cup of acid, and some copper wire.

Bell filed his application just hours before his competitor, Elisha Gray, filed notice to soon patent a telephone himself. What's more, though neither man had actually built a working telephone, Bell made his telephone operate three weeks later using ideas outlined in Gray's Notice of Invention, methods Bell did not propose in his own patent.

United States Patent No. 174, 465, issued to Alexander Graham Bell in 1876, became recognized as the “ most valuable patent.” Yet early efforts to popularize the telephone were met with disappointment. Though people paid to hear Bell lecture on “ the miracle discovery of the age”, for a long time they seemed unaware of its possibilities.

The telegraph and telephone are both wire-based electrical systems, and Alexander Graham Bell's success with the telephone came as a direct result of his attempts to improve the telegraph.

In July of 1877, the Bell Telephone Company was formed by Gardiner Hubbard. By the end of 1877 there were three thousand telephones in service.

In 1906 Lee de Forest invented the electron tube. Its amplifying properties pointed the way to national phone service. Long distance service at that time was still limited. Loading coils helped to a point but no further.

As the new century dawned, the Bell Company had 800, 000 phones in service compared to 600, 000 in independent territories. In 1921 the Bell System introduced the first commercial panel switch, an odd beast if there ever was one. When crossbar switching came on the scene in 1938, panel switches were removed where possible, although some remained working until the mid 1970s. Panel became the first defunct switch in the public switched telephone network.

In 1927 commercial long distance radio-telephone service was introduced between the United States and Great Britain. AT&T and the British Postal

Office got it on the air after four years of experimenting. They expanded it later to communicate with Canada, Australia, South Africa, Egypt and Kenya as well as ships at sea.

On June 30, 1948 the Bell System unveiled the transistor, a joint invention of Bell Laboratories scientists William Shockley, John Bardeen, Walter Brattain and Ralph Bown. It would revolutionize every aspect of the telephone industry and all of communications.

In August, 1951 the first transcontinental microwave system began operating. One hundred and seven relay stations spaced about 30 miles apart formed a link from New York to San Francisco. It cost the Bell System \$40, 000, 000; a milestone in their development of radio relay begun in 1947 between New York and Boston. In 1954 over 400 microwave stations were scattered across the country.

Nowadays the industry has divided into telephone equipment manufacturers and telephone network operators. Operating companies often hold a national monopoly. In the United States, the Bell System was vertically integrated. It fully or partially owned the telephone companies that provided service to about 80% of the telephones in the country and also owned Western Electric, which manufactured or purchased virtually all the equipment and supplies used by the local telephone companies.

Some of the most valuable patents:

- US 174, 465 - Telegraphy (Bell's first telephone patent) - Alexander Graham Bell.

- US 186, 787 - Electric Telegraphy (permanent magnet receiver) - Alexander Graham Bell.
- US 474, 230 - Speaking Telegraph (graphite transmitter) - Thomas Edison.
- US 203, 016 - Speaking Telephone (carbon button transmitter) - Thomas Edison.
- US 222, 390 - Carbon Telephone (carbon granules transmitter) - Thomas Edison.
- US 485, 311 - Telephone (solid back carbon transmitter) - Anthony C. White (Bell engineer). The design was used until 1925 and installed phones were used until the 1940's.
- US 3, 449, 750 - Duplex Radio Communication and Signalling Appartus - G. H. Sweigert.
- US 3, 663, 762 - Cellular Mobile Communication System - Amos Edward Joel from Bell Labs.
- US 3, 906, 166 - Radio Telephone System (DynaTAC cell phone) - Martin Cooper from Motorola.

Some intersecting events, which have influence on the telecommunication market, are described below.

The Kingsbury Commitment of 1913 marked the beginning of AT&T's monopoly. The Bell System and independent telephone operators reduced competition out of concern for government intervention. The government had been increasingly worried that AT&T and the other Bell Companies were monopolizing the industry. Named after AT&T Vice President Nathan C.

Kingsbury, who helped negotiate the terms, the agreement outlined a plan whereby

The Graham Act of 1921 exempted telephone companies from the antitrust laws in order to make it possible for them to “unify the service” by merging competing telephone exchanges. In so doing, it provided the legal foundation for the first generation universal service policy.

The Communications Act of 1934 has a goal of universal service at reasonable charges as its key tenet. The FCC was formed by this Act.

The Rural Electrification Act of 1936 created and established an agency of the United States to be known as the “Rural Electrification Administration”, all of the powers of which shall be exercised by an Administrator, who shall be appointed by the President, by and with the advice and consent of the Senate, for a term of ten years, and who shall receive a salary of \$10,000 per year.

The AT&T Consent Decree of 1956 was the final judgment limited the Bell System to common carrier communications and government projects but preserving the long-standing relationships between the manufacturing, researches and operating arms of the Bell System. AT&T retained Bell Laboratories and Western Electric Company.

“*The Carterphone Decision of 1968*”. This year Carter won a decision against AT&T that allowed anybody to connect anything to AT&T's telephone network, if they used an AT&T “Protective Coupler.”

The MCI ruling of 1969 was FCC ruling that would affect the company was the 26 June 1968 ruling in the Carterphone case that deemed AT&T's rules prohibiting private two-way radio connections to a telephone network were illegal.

The 1984 Modified Final Judgment (MFJ) divided the country into seven state based geographic regions, in which one RBOC would provide local phone service.

The Telecommunications Act of 1996 is the first major overhaul of telecommunications law in almost 62 years. The goal of this new law is to let anyone enter any communications business - to let any communications business compete in any market against any other.

Advanced Research Projects Agency (ARPA) started in the 1960s; the engineers were encouraged research into time-sharing and helped lay the groundwork for computer networking and ARPANET, the predecessor of the Internet.

The earliest packet switching research was sponsored by the Information Processing Techniques Office of the Department of Defense Advanced Research Projects Agency, which acted as a visionary force shaping the evolution of computer networking as a tool for coherent harnessing of far-flung computing resources. The first experiments were conducted around 1966. Shortly thereafter, similar work began at the National Physical Laboratory in the UK. In 1968 DARPA developed and released a Request for Quotation for a communication system based on a set of small,

interconnected computers it called "Interface Message Processors" or "<https://assignbuster.com/the-major-events-of-telecommunications-history-essay-sample/>

IMPs.” The competition was won by Bolt Beranek and Newman (BBN), a research firm in Cambridge, MA, and by September 1969 BBN had developed and delivered the first IMP to the Network Measurement Center located at UCLA. The “ ARPANET” was to touch off an explosion of networking research that continues to the present.

The first phase of this work culminated in a demonstration in July 1977, the success of which led to a sustained effort to implement robust versions of the basic Internet protocols (called TCP/IP for the two main protocols: Transmission Control Protocol and Internet Protocol). The roles of DARPA and the Defense Communications Agency were critical both in supplying sustained funding for implementing the protocols on various computers and operating systems and for the persistent and determined application of the new protocols to real needs. In 1977 a four-network demonstration was conducted linking ARPANET, SATNET, Ethernet and the PRNET. The satellite effort, in particular, drew international involvement from participants in the UK, Norway, and later Italy and Germany.

By the mid of 1980s there was sufficient interest in the use of Internet in the research, educational, and defense communities that it was possible to establish businesses making equipment for Internet implementation. Companies such as Cisco Systems, Proteon, and later Wellfleet (now Bay Networks) and 3Com became interested in manufacturing and selling “ routers,” the commercial equivalents of the “ gateways” that had been built by BBN in the early ARPANET experiments. Cisco alone is already a \$5 billion business, and others seem headed rapidly toward that level.

In late 1980s growth many community network early systems included PEN (Public Electronic Network) in Santa Monica, the WELL (Whole Earth ' Lectronic Link) in the Bay area of San Francisco, Big Sky Telegraph, and a host of small businesses with online universities, community bulletin boards, artists networks, seniors clubs, women networks etc.

Gradually, as the 1980s came to a close, these networks also began joining the Internet for connectivity and adopted the TCP/IP standard. Now the PC networks and the academic networks were joined, and a platform was available for rapid global development.

In 1994 American releases control of internet and WWW is born - making communication at light speed.

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