

History of Electronics

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1600: William Gilbert, a British scientist, makes up the word **electricity** from the Greek word for amber. He begins experimenting with static electricity and magnetism. Gilbert is later called the father of electricity and magnetism.



1752: Benjamin Franklin conducts his most famous experiment with a key, a kite and a lightning bolt. He proves that a lightning bolt is actually a large current flow. He invents lightning rods to protect buildings from lightning strikes.



1800: Alessandro Volta of Italy builds the first battery, called a voltaic pile. He proves that electricity can travel through wires. Volta's battery was the first reliable and practical source of electricity. The words **voltage** and its unit of measurement, the **volt**, come from his name.



1821: Michael Faraday proves that electricity can create magnetism, and that magnetism can create electricity. His inventions include the electric motor and the DC generator. The unit of measurement for capacitance, the **farad**, is named in his honour.



1826: Georg Simon Ohm, a German scholar, defines the mathematical relationship between voltage, current and resistance. The unit of measurement for resistance, the *ohm*, is named in his honour.



1826: Andre Ampere, a French mathematician, publishes a book detailing his experiments and discoveries about the relationship between electrical current and magnetism. The unit of measurement for current, the *ampere*, is named in his honour.

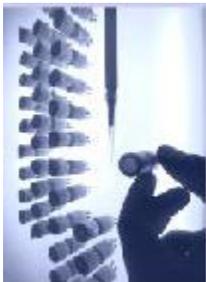


1879: Thomas Edison, American inventor of the phonograph, improves on the light bulb, develops parallel circuits, fuses, insulating materials and switchable light sockets.

Edison's work in producing an improved vacuum inside a glass bulb paves the way for modern light bulbs and also the vacuum tube (essential later in computers).



1904: The first practical application of a vacuum tube, the diode, is invented by John Fleming. In 1906, Lee de Forest improves on Fleming's work and invents a vacuum tube capable of amplifying, the triode.



1947: American scientists working for Bell Telephone discover the transistor, which is more reliable and cooler than a vacuum tube. The transistor will revolutionize electronics. Before transistors, computers were the size of a classroom and weighed several tons.



1958: The silicon chip - or integrated circuit (IC) – is invented at the same time by researchers at both Texas Instruments and Fairchild Semiconductor. IC's are miniature, complex circuits contained in a single small housing. The development of the IC is said to be one of the most significant achievements in the history of mankind. IC's are a basic component of microelectronics.



1975: Bill Gates and his friend Paul Allen create Microsoft. Gates foresees personal computers in every home and office – this is an idea that is laughed at by most people. Microsoft starts with MSDOS and then comes out with Microsoft Windows and Microsoft Office which are huge successes.

Gates goes on to become one of the richest people in the world.



1976: Steve Jobs and Steve Wozniak create Apple and start selling the “Apple 1” personal computer. It was the “Apple II” that becomes really popular.

In 1979, Jobs tours a Xerox facility and – in the research and development area - sees a mouse and a “graphical user interface” (GUI). He uses both, first in 1983’s “Apple Lisa” (which fails) and then in 1984’s “Macintosh” (which is a huge success).

(In 1985, Steve Jobs is forced out of Apple, but returns in 1997 to lead Apple again.)