

A Brief History of Computer Generations

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The invention of the computer did not occur in the past two centuries; in fact, the first computer was probably the abacus, which was used about 5,000 years ago in Asia Minor. As we know them today, computers were first used just after the Second World War, around 1945. Since then, several computer advancements have occurred that make it possible to classify computer power by one of the significant advancements that can be associated with particular time periods or generations. The following paragraphs summarize the major developments that occurred in each of these generations.

First-Generation Computers

The first generation of computers generally runs from 1945 to 1956. During this time, the first vacuum tube computer, the ENIAC, was invented. The first commercial computer was called the UNIVAC, and it was used by the U.S. Census Bureau. It was also used to predict President Eisenhower's victory in the 1952 presidential election (Baker, 2003).

Second-Generation Computers

During this period, 1956 to 1963, computers were run by transistors. These computers were known for their ability to accept instructions for a specific function that could be stored within the computer's memory. This is also the period when COBOL and FORTRAN were used for computer operations. The entire software industry began in this generation.

Third-Generation Computers

This computer generation ran from 1964 to 1971, and it is characterized by the use of integrated circuits to replace the transistors from the previous generation. As a result of this invention, computers became smaller, faster, and more powerful (Diaz & Moore, 2004).

Fourth-Generation Computers

This generation is placed in the 1971 to 1999 time category. Again, computers became smaller and faster, and the Intel chip was responsible for most of the changes taking place in this 29-year period.

Enhancements in Speed

Because of the rapid miniaturization that took place with the chip, the CPU, memory, and input/output controls could now be placed on a single chip. Computers were becoming faster and faster; and they were being used in everyday items such as microwave ovens, televisions, and automobiles.

Commercial Applications

Word processing and spreadsheet applications made their debut in this generation, as did home and video game systems. Names such as Pac-Man and Atari were very popular with computer users.

Fifth-Generation Computers

According to Allen, the turn of the century marks this generation, and it will be associated with artificial intelligence, spoken word instructions, and superconductor technology, which allows electricity to flow with little or no resistance (2005, p. 130).