**Microprocessors**

"[Go to The First Microprocessors"](http://library.thinkquest.org/28787/micropro1.htm#The First Microprocessors)

["Go to the 286 Microprocessor"](http://library.thinkquest.org/28787/micropro1.htm#The 286 Microprocessor)

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**1. Introduction**

 Introduced in 1971, the microprocessor consists of miniature electronic devices which handle many different tasks. Initially, these tasks were slower and smaller than that of large computers but led to a computer revolution by making available, computers at low cost which enticed the man in the street.

**2.** **The First Microprocessors**

 The first microprocessors built in 1971 were considered to be computers on silicon chips. The Intel 4004 was used to power calculators.

The Intel 8008 built in 1972, was used to create a "TV Typewriter" and was used as a dumb terminal.

Meanwhile, other companies were also developing microprocessors which were being used for calculators, watches, cameras, washing machines, telephone switchboards and other items.

In 1974, Intel created the 8080 Microprocessor which was used to manufacture the first personal computer. A personal computer is designed to be light weight and easy to carry. It’s aim was to store a person's personal information and to write and play games on. This first P.C. was called the Altair and generated massive sales within months.

Other microprocessors of note during this time was the Z80 and the 6502. These were used to power the micro computer which had the "brain" inside the keyboard and often used the TV for a screen. The micro worked by responding to commands typed in. These commands were in the form of programs called Basic. Inside the computer was an interpreter which would translate the Basic language into machine language and then display the results on the screen in the form of graphic or games.

In 1977, the Apple II personal computer was launched and was much cheaper than mainframe computers. This made computers available to many people and was purchased by businesses that either could not afford mainframes or did not need the computing power of a mainframe.

In 1978, Intel developed the 8086-8088 microprocessor which was used by IBM for their first P.C.



**3.** **The 286 Microprocessor**

In 1982, Intel produced the 80286 microprocessor. This was the first Intel chip that could run all the software that was written for its predecessor. The 286, as it was known, was sold to over 15 million people around the world. It also did not take long, before there were a host of new brand 286 chips and some no-name brand 286 chips to flood the market.

**4.** **The 386 Microprocessor**

In 1985, Intel built the revolutionary 386 microprocessor which was a 32 bit chip that could run multiple programs at the same time.

Apple produced the Apple Mackintosh which was the first computer to use a graphical user interface (GUI). This meant that its users had life made easier for them by having pictures of the operating system commands. All they had to do, was point and click on the picture and the program would run.

At the same time, Advanced Micro Devices were also in competition with Intel and were developing variations of the 386 microprocessor. Soon, users could choose between single speed and double speed, much more memory and a variety of hard drive options.

Microsoft launched Windows 3.0 in 1986 which rivalled the Apple GUI system.

**5.** **The 486 Microprocessor**

The rivalry between the various manufacturers, brought about the 486 generation of computers. The Intel 486 (TM) was the first processor to offer a built-in math coprocessor which speeded up computing. Soon, the single speed and double speed 486 processors were phased out for the faster 486 DX -33 and the 486 DX-66. As technology advanced at massive speeds, the next phase of 486 allowed easier installation of hardware with plug and play Bios and greater speed. The 486 DX2 was then replaced by the superfast 486 DX4.

**6.** **Pentium**

The Intel Pentium processor was introduced in 1993. This was a big leap from the 486 and was a 586 chip with a new name. Initially, the Pentium chip gave many problems the main one being overheating which was solved by placing a fan over the chip. It was also very expensive and the competitiveness of the 486 made the Pentium a slow entry into the marketplace.

The Pentium was designed to include speech, sound and photographic images. The CD-Rom development also played a big part in the life of the Pentium.

With the Pentium motherboard, came the PCI slot which was smaller than the ISA slots of the 486. This meant a vast change in the design of all add on cards.

**7.** **Pentium Pro**

In 1995, the Pentium Pro was released by Intel. This processor was designed to run 32 bit servers with multiple workstations. It enabled faster computer design facilities and better scientific calculations. The motherboard also had a second memory chip to enhance the speed of processing. The motherboard had 5.5 million transistors on it.

Soon Intel had designed its MMX(TM) technology which was faster and better. The early MMX had a different type of memory chip called a DIMM. The DIMM was long and used 124 pins. Each memory card could hold twice as much memory than before. Each memory card started at 32Mb and went to 128Mb.

**8.** **Pentium II**

Always trying to maintain the competitive edge, Intel launched the Pentium II processor in 1997. The Pentium II incorporated the MMX(TM) technology and was designed to process video, audio and graphics more effectively. It’s high speed capabilities brought the concept of "now" technology. It is able to turn itself on when another computer wishes to access it and when in shutdown mode, will automatically turn itself off.

**9.** **Pentium III**

The Intel Pentium III processor of 1999, was a jump to the next level by Intel to try and get away from AMD, the other company that produces processors. AMD had just caught up to Intel's fastest Pentium II processor at cheaper prices. Intel jumped to the Pentium III at speeds of 450 MHz and 500 Mhz which left AMD flatfooted for a short while. The Intel Pentium III was designed to run on the Internet and has built in automatic security features. It also has as a design feature, 3D capabilities on the processor. A few months after the release of the Pentium III, AMD had the answer - the AMD K6 IIIP 3D Now which performs on a par with the Pentium III but is only a quarter of the price.