The central processing unit 13748

Technology, Internet

The Central Processing Unit

Microprocessors, also called central processing units (CPUs), are frequently described as the " brains" of a computer, because they act as the central control for the processing of data in personal computers (PCs) and other computers. Chipsets perform logic functions in computers based on Intel processors. Motherboards combine Intel microprocessors and chipsets to form the basic subsystem of a PC. Because it's part of every one of your computer's functions, it takes a fast processor to make a fast PC. These processors are all made of transistors. The first transistor was created in 1947 by a team of scientists at Bell Laboratories in New Jersey. Ever since 1947 transistors have shrunk dramitically in size enabling more and more to be placed on each single chip.

The transistor was not the only thing that had to be developed before a true CPU could be produced. There also had to be some type of surface to assemble the transistors together on. The first chip made of semiconducitve

material or silicon was invented in 1958 by Jack Kilby of Texas Instruments.

Now we have the major elements needed to produce a CPU. In 1965 a company by

the name of Intel was formed and they began to produce CPU's shortly thereafter.

Gordon Moore, one of the founders of Intel, predicted that the number of

transistor placed on each CPU would double every 18 months or so. This sounds

almost impossible, however this has been a very accutate estimation of the

evolution of CPUs. Intel introduced their first processor, a 4004, in November

of 1971. This first processor had a clock speed of 108 kilohertz and 2, 300

transistors. It was used mainly for simple arithmetic manipulation such as in a

calculator. Ever since this first processor was introduced the market has done

nothing but soared to unbelievable highs. The first processor common in

personal computers was the 8088. This processor was introduced in June of 1978.

It could be purchased in three different clock speeds starting at 5 Megahertz

and going up to 10 Megahertz. This CPU had 29, 000 transistors. Then came the

80286 and 80386 processors. The 386 was the first processor to be introduced in

the DX, SX, and SL versions. Next came the 80486 processors of which there were

even more choices here. The first 486 processor had 1, 200, 000 transistors and

the latest have 1. 4 million transistors. There clock speeds varied any where

from 16 MHz on the first ones to 100 MHz on the most recent 486 processors.

Some of which are still in use in homes all around the country. Next came the

Pentium Processor, March 1993, running at clock speeds of 60 & 66 Mhz. These

first pentium processors had 3. 1 million transistors, and had a 32-bit data path.

Now the pentium processor range anywhere from 90 MHz to 200 MHz and are the

most widely used processor today. Intel is currently producing two new pentium

processors with MMX technology. These two processors, running at 166 & 200 MHz,

are made to accelarate graphics and multimedia software packages. Currently the

newest processor to be introduced in a 400 MHz processor made also by Intel.

This new processor illustrates the performance potential of the new P6

architecture. It contains 7. 5 million transistors and also includes the new MMX

technology.