SHORT COMMUNICATION

MMX Technology

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Multimedia Extensions (MMX) is a new enhanced Pentium processor released by Intel on 8 January 1997. This P55C-based CPU has already attracted multimedia users because of its better performance with its image processing capabilities and handling of MPEG video and audio. It uses an enhanced 80 x 86 instruction set that allows multiple bytes of data to be packed onto one register on a chip and processed in parallel. Intel claims that this CPU will give boost to image processing, 3-D graphics, video and audio applications because of its parallel processing approach.

MMX technology has extended the Intel's existing CPU architecture and improved the performance of multimedia, communications, graphics and other applications. It uses Single Instruction Multiple-Data (SIMD) technique and applies parallel processing in many algorithms to produce 1.5 to 2 times faster application performance on the same processor without MMX. It is fully compatible with PC operating systems and applications.

Many users have already tested its performance by running complex 3-D animations on various types of PentiumPro Systems. Results showed that 166 MMX PC and 8500/180 PowerMac performed equal (2.2), whereas 200 MHz MMX PC ranked as number one (2.7) and 9500/200 PowerMac as number two. This clearly shows that MMX significantly improved its performance over the Pentium, however, it couldn't surpass PowerMac clones. MMX systems came very close to PowerMac only in multimedia operations but not in other types of computing or operations.

To take full advantage of MMX technology, a program must be specifically written in that environment, otherwise there may not be any speed difference with or without MMX chip for applications or software that are available in the market, such as Adobe PhotoShop, MS PowerPoint and Macromedia Director. Several users have found that these applications performed 50% faster using MMX chips. MMX CPU is also useful for the Web-based applications such as virtual reality markup language (VRML) sites, 3-D graphics and animation to run smoothly on the existing Pentiums.

By mid 1997, other chip manufacturers such as AMD and Cyrix will also manufacture MMX-compatible chips. Other software companies are also working hard to rewrite the compatible software to MMX chips. Now the question in the hand of multimedia users is to buy a MMX CPU for the existing machines or new computers with MMX CPUs. Intel has already planned to release all their desktop (starting 160 MHz to 200 MHz) and notebook CPUs (150 MHz to 166 MHz) with MMX processor this year. It is also incorporating MMX technology in the forthcoming P6 CPU, an advanced version of PentiumPro processor. By the end of this year, if not by next year, users may find only MMX processors in the market as Intel has already decided to take off the non-MMX CPUs from their shelf. Overall, MMX technology is a boon for the entire PC multimedia Industry, and particularly in advanced multimedia designing.

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