

AT A GLANCE

**Intel's MMX Speeds Multimedia** . . . . . 1  
 Intel today formally introduced 57 new instructions, collectively known as MMX, intended to increase the performance of multimedia applications by 50–100% or more. This increase is achieved by operating on up to eight operands in parallel. MMX will appear first in the P55C Pentium late this year and eventually throughout Intel's product line. We expect MMX will be used mainly in driver software but will also appear in some applications. This increase in multimedia performance should spur PC sales, particularly in the consumer market.

**Editorial: Intel's Geography Lesson.** . . . . . 3  
 Intel has renamed its future CPU projects for rivers. Klamath and Deschutes are low-cost versions of Pentium Pro due in 1997, while Merced, expected in 1998, will be the first chip to implement the 64-bit Intel/HP architecture. These and other projects represent an increase in Intel's already rapid deployment of new processors.

**Most Significant Bits** . . . . . 4  
 Apple broadens Mac OS licensing; Digital first to exceed 10 SPECint95; Mobile Pentium heats up to 133 MHz; Pentium systems get OverDrives; Netpower moves to Pentium Pro; Processor modules aid notebook design; First USB microcontroller comes from Intel; P-Rating clarification.

**Alpha Runs x86 Code with FX!32.** . . . . . 11  
 Digital's FX!32 software combines x86 emulation and translation to provide high-speed execution of 32-bit x86 applications on Alpha systems running Windows NT. Applications are first emulated, then translated off-line to improve performance. This technology could give Digital an edge over other RISC rivals in the NT market.

**Motorola, TI Extend 16-Bit DSP Families** . . . . . 14  
 Motorola's 56800 family combines aspects of a traditional DSP with the ease of use of a microcontroller while bringing the price of 16-bit DSP performance below \$10. Texas Instruments counters with its new 16-bit 320C2xx family, which includes DSPs with on-chip flash memory and others priced below \$15.

**Competition Heats Up in 3D Accelerators** . . . . . 16  
 Chromatic's Mpact and Rendition's Verite chips are programmable devices that handle 3D graphics. Companies such as 3Dlabs and 3Dfx are focused entirely on the 3D market, while traditional 2D-graphics vendors such as Oak, S3, Trident, and Videologic have also recently developed chips for the emerging 3D market. Nvidia has coupled an enhanced 3D accelerator with an audio DSP in its latest device, the NV3. Oak's new 64311 chip delivers a compelling combination of high performance and moderate system cost.

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MICROPROCESSOR REPORT

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Microprocessor Report is published every three weeks, 17 issues per year. Rates are: N. America: \$495 per year, \$895 for two years. Europe: £375 per year, £645 for two years. Elsewhere: \$595 per year, \$1,095 for two years. Additional copies in the same envelope: \$175 per year in North America, \$225 elsewhere. Back issues are available.

Published by



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Winner, Computer Press Award, 1993, 1994



Printed on recycled paper with soy ink.