

**Intel Fumbles MMX Transition** . . . . . 1  
 Aggressive advertising for MMX has dried up demand for non-MMX processors faster than Intel expected, forcing the CPU vendor to cut prices and boost production more quickly than usual. While the awkward transition could cost the company as much as a billion dollars in lost profit, the price cuts will make life more difficult for AMD and Cyrix while benefiting PC buyers.

**Editorial: 3D Chips Take Larger Bite of PC Budget** . . . . . 3  
 The cost of a high-performance 3D subsystem is rising, but many PC buyers will pay more to get better 3D performance, skimping slightly on CPU performance instead.

**Most Significant Bits** . . . . . 4  
 Cyrix boosts MediaGX speed; Motorola, IBM reach Mach 5; First U.S. patent on Merced issues; PowerPC 603e in industrial, military grades; Sega 64 dumps 3Dfx for PowerVR; IBM to provide NC design kit; LG Semicon firms up Java plans.

**Letters to the Editor** . . . . . 9  
 Readers respond to Jim Turley's editorial attempt to deflate the Java hype, some with praise, others with condemnation.

**Atmel AVR Brings RISC to 8-Bit World** . . . . . 10  
 Better known for its flash-memory chips, Atmel has developed a new CPU design that takes advantage of many RISC principles while sticking with an 8-bit data width. This combination provides better performance than traditional 8-bit chips without significantly increasing cost.

**Multithreading Comes of Age** . . . . . 13  
 While Intel and HP develop an entirely new instruction set for Merced, research indicates that a multithreaded processor could achieve a similar performance boost without abandoning existing instruction sets. Multithreading, which need not require extensive changes to current superscalar processor designs, shows the most promise in servers and in multimedia applications.

**The Slater Perspective: Challenges of Being Fabless** . . . . . 19  
 While fabless companies have been key players in the chip-set and graphics-chip markets, they have found the high-performance microprocessor market more difficult to crack.

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