

**3D Vendors Aim High** . . . . . 1  
 In this second part of our three-part series on new 3D chips, we look at three new rendering engines designed to satisfy the needs of professional users. The Permedia 3 from 3Dlabs, with its good OpenGL support, is well suited to the CAD user; Number Nine's Ticket To Ride 4 excels at rendering for high-resolution monitors; and the RIVA TNT from Nvidia provides unmatched 3D performance.

**Editorial: What's Wrong With Merced** . . . . . 3  
 Merced could be in trouble. With the part delayed into 2000, and sources in the know now downplaying its performance, Intel may now be looking to McKinley in 2001 to rescue IA-64 from disaster.

**Most Significant Bits** . . . . . 4  
 Chromatic's Mpack Impacts; Coppermine to open in 2H99; Deep price cuts for Pentium II; K6 shipments rise, but prices drop; 3Dlabs takes Dynamic Pictures; SPEC scores with new 3D benchmarks.

**MoSys Returns to the Mainstream** . . . . . 9  
 MoSys has resurfaced with a new 512K Mcache part that is based on DRAM technology but externally indistinguishable from a traditional pipelined-burst SRAM.

**Embedded News** . . . . . 10  
 Motorola, AMD swap technology; IBM trades PowerPC for ST's x86; QED's RM52xxs get more cache, faster clocks; Intel appears bullish on StrongArm; Motorola vows to rationalize design process; ARM sneaks into PlayStation video game.

**MIPS RM7000 Emerges From QED** . . . . . 12  
 QED's latest superscalar processor is the first low-cost processor to integrate a large 256K L2 cache on chip. At 300 MHz, the RM7000 provides outstanding integer and floating-point performance.

**Transistor Budgets Go Ballistic** . . . . . 14  
 With transistor budgets growing exponentially, microprocessor architects face the issue of how to use them effectively. New CPU architectures capable of exploiting new levels of parallelism may appear; large on-chip caches and direct connections to DRAM may eliminate external SRAM caches; and integrated multimedia and graphics capabilities could make life tough for coprocessor vendors.

**The Slater Perspective: PC Processor Market Stratifies** . . . . . 19  
 With the sub-\$1,000 PC market growing and Intel's competitors zeroing in on that segment, Cyrix, IDT, and Rise will fight it out while AMD tries to rise above the fray. How low Intel will go remains to be seen.

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*Microprocessor Report* (ISSN 0899-9341) is published every three weeks, 17 issues per year. Rates are: N. America: \$595 per year, \$1,095 for two years. Europe: £450 per year, £795 for two years. Elsewhere: \$695 per year, \$1,295 for two years. Back issues are available.

Published by



Business Office

874 Gravenstein Hwy. So., Suite 14  
 Sebastopol, CA 95472  
**Phone:** 707.824.4004 **Fax:** 707.823.0504  
**Subscriptions:** 707.824.4001  
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World Wide Web: [www.MDRonline.com](http://www.MDRonline.com)

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**Computer Press Award, Best Newsletter,  
 Winner, 1993, 1994, and 1997**

Printed on recycled paper with soy ink.