

Pentium III = Pentium II + SSE 1
 Intel has just announced its much-ballyhooed 500-MHz Pentium III processor, previously known as Katmai. The chip, while underwhelming in its microarchitectural prowess, adds new “Internet streaming-SIMD extensions” that will dramatically boost multimedia performance—especially once the chip moves to 0.18 micron and gains an on-chip L2 cache later this year.

Editorial: What’s the Best Way to Benchmark? 3
 Benchmarking embedded systems is difficult, and Dhrystones are no longer a good measure of a microprocessor—if ever they were. But what really is important to test, and what is irrelevant? Is it better to optimize or to standardize? The EEMBC has one answer.

Most Significant Bits 4
 SGI extends MIPS map; Chartered, HP go HiPer (MOS); Dixon to be Intel’s first 0.18-micron chip.

Embedded News 5
 Sun to give away PicoJava, SPARC cores; MIPS signs Texas Instruments; MoSys to offer MDRAM technology; SST—yet another 8051 supplier; Tom Halfhill joins MDR.

Tensilica CPU Bends to Designers’ Will 12
 Silicon Valley startup Tensilica has disclosed its unique approach to embedded-processor design. The new company will provide a set of tools that allow users to create their own specialized processor core, integrate it with custom circuits, and synthesize it all in an ASIC.

Intel Discloses New IA-64 Features 16
 Information on IA-64 and Merced continues to dribble out slowly. At the recent Intel Developers Forum, HP and Intel disclosed a few more carefully selected tidbits. New details were provided on IA-64’s rotating-register scheme, its branch architecture, and its speculative load feature. Merced’s packaging module and its companion 460GX chip set were also previewed.

CPU Business to Rebound in 1999 20
 The worst is behind us. Although 1998 was a perfectly dismal year for the 32-bit microprocessor industry, our forecast for 1999 looks much brighter. With Asia looking less bleak, low PC-channel inventories, and Y2K driving upgrades, unit growth could reach 45%.

AMD Gets the Illrd Degree 22
 In desperate need of higher ASPs, AMD has finally announced its K6 III processor, alias Sharptooth. With 256K of L2 cache pasted onto a K6-2 core and a boost in clock frequency to 450 MHz, the K6 III benchmarks neck-and-neck with Intel’s new Pentium III—a fact that the “K6 III” moniker is designed to emphasize.

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The Slater Perspective and Recent ICs will return in the next issue.

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