

**Slot vs. Socket Battle Heats Up** . . . . . 1  
 After a year in which it moved the PC market to MMX, Intel will spend 1998 converting the market to Pentium II. Well before the end of the year, Intel will virtually stop shipping Socket 7 processors in favor of Pentium II's Slot 1. In contrast, AMD, Cyrix, and IDT will continue innovating within Socket 7, delivering 3D extensions and on-chip L2 caches to improve performance. These vendors will probably take share from Intel, but only if a significant portion of the market continues to accept Socket 7 processors.

**Editorial: Life After Intel in the 3D Market** . . . . . 3  
 With Intel's entry into the 3D market imminent, competitors are advised to avoid head-to-head combat with the giant. Safe havens, at least for now, include integrated graphics chips, notebook chips, and very high and very low cost devices.

**Most Significant Bits** . . . . . 4  
 Intel drops Pentium II to \$268; Low-cost UltraSparc-2i appears; ATI's new Rage IIC fits in Rage Pro footprint; Intel buys into Real3D, closes C&T deal; RISC system growth stalls; Erratum: Acer Aladdin V.

**Embedded News** . . . . . 13  
 Lexra reverse-engineers MIPS R3000 core; NEC R4305 cuts cost of R4300; Microsoft unveils "Gryphon" Palm PC; TCI chooses Windows CE, PersonalJava.

**RISC Volume Gains But 68K Still Reigns** . . . . . 14  
 During the past year, MIPS volume surged due to video-game sales, but Motorola's 68K remained the best-selling 32-bit embedded processor. Consumer electronics drove total 32-bit embedded sales above 180 million units as vendors specialized in higher performance with minimal cost and low power consumption. PDAs and NCs contributed few units in 1997 but are poised for growth.

**Media Processors Begin to Specialize** . . . . . 19  
 The two remaining media-processor vendors are headed in opposite directions. Chromatic is focusing on the PC market, while Philips TriMedia concentrates on consumer electronics. In 1998, a few new media-processor vendors may reveal their plans.

**Demystifying EPIC and IA-64** . . . . . 21  
 In addition to the features already revealed, IA-64 is likely to cluster function units, enabling higher clock speeds, and include delayed branching. These features, as well as the known EPIC characteristics, can be added to existing RISC instruction sets using extension words. A retrofitted processor could execute current RISC binaries, but on programs compiled to take advantage of the new EPIC features, the processor could be as fast as or faster than IA-64 chips.

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