

**The Race to Point One Eight** . . . . . 1  
 Next year, microprocessor manufacturers will all begin the transition from 0.25-micron processes to the 0.18-micron generation. IBM is the most aggressive with its early adoption of copper interconnects and silicon-on-insulator technology. In this article, we survey the status of seven major chip vendors' 0.18-micron processes.

**Editorial: IC Manufacturing Complexity Increases** . . . . . 3  
 As semiconductor processes push toward 0.13 micron, the problems become complex and the solutions expensive. Industry giants should have an edge, but high volume makes vendors like Intel averse to risky technologies, leaving an opening for more nimble competitors.

**Most Significant Bits** . . . . . 4  
 IBM delivers on copper promise with 750-400; Alpha 21264 whiffs on performance targets; Intel accelerates desktop price cuts; Mobile Pentium II hits 300 MHz; Intel delivers final OverDrive processor; Faster Xeon parts delayed; AMD ships K6-2 at 350 MHz, readies K6-3; SiS adds 3D to Slot 1, too.

**Embedded News** . . . . . 11  
 Intel prescribes more performance for i960RN; TI 'C6202, 'C6211 extend high-end DSP range; VLSI handles first PalmDSPCore; Atmel comes out of the closet with ARM.

**MPC8260 Masters Network Control** . . . . . 12  
 Motorola's new network controller is its biggest, fastest, most complex controller yet. Based on a PowerPC 603e core, the part integrates a communications processor and 13 high-speed serial ports.

**Motorola Turns Page With MMC2080** . . . . . 14  
 A new M•Core-based processor from Motorola implements the company's advanced Flex paging protocol on a single chip.

**ATI Takes 3D Lead With Rage 128** . . . . . 16  
 At a price that should put it into millions of popular PCs, ATI's new 3D accelerator provides impressive performance and more consumer-oriented features than any other 3D chip so far.

**TI Aims for Floating-Point DSP Lead** . . . . . 18  
 Determined not to let Analog Devices corner the market on floating-point DSPs, Texas Instruments is reasserting itself with its new VLIW-based 'C6701, able to deliver up to a billion FLOPS.

**The Slater Perspective: Why Aren't Computers Better?** . . . . . 23  
 The gap between what computers could be and what they actually deliver is staggering. The problem is software; unfortunately, the solution will come only from software that is destined to improve at a far slower rate than Moore's Law-driven hardware.

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