

**BUSES**

**An introduction to I<sup>2</sup>O.** The intelligent I/O architecture promises significantly improved throughput. Larry Mittag, *Embedded Systems Programming*, 10/97, p. 44, 5 pp.

**DSPS**

**DSP chip families.** A directory of popular digital signal processors. *Embedded Systems Programming*, Buyer's guide 1997, p. 116, 6 pp.

**Get the most out of the TMS320C32 with an x86 host.** Squeezing performance from a C32-based DSP system doesn't require black magic; just careful design with attention to detail. Chris Stolarik, RadSep; *Electronic Design*, 9/97, p. 85, 6 pp.

**DSPs get parallel.** Effective parallel DSP systems require more than interconnected processors. Rick Grehan, *Computer Design*, 9/97, p. 83, 5 pp.

**IC DESIGN**

**Deep submicron challenges physical-design tools/methodology.** You may need a new methodology before you tackle your IP-based system ASICs. Barbara Tuck, *Computer Design*, 9/97, p. 57, 5 pp.

**Desktop EDA tools coming together.** Ingenious strategies are combining different tools into a single integrated design environment. But "integrated" means different things to different people. Charles H. Small, *Computer Design*, 9/97, p. 70, 3 pp.

**Verifying a million-gate processor.** Simulating a new UltraSparc microprocessor requires good techniques and a lot of computing power. James Gateley, Sun; *Integrated System Design*, 10/97, p. 18, 4 pp.

**Are we outsourcing our morality?** Our system for IP is broken. Barbara Tuck, *Computer Design*, 9/97, p. 68, 1 pg.

**MEMORY**

**General-purpose EPROM.** A directory of erasable PROMs. *Embedded Systems Programming*, Buyer's guide 1997, p. 128, 2 pp.

**EEPROM.** A directory of EEPROM and flash memory chips. *Embedded Systems Programming*, Buyer's guide 1997, p. 130, 2 pp.

**MISCELLANEOUS**

**Writing portable assembly code for embedded PowerPC applications.** All assemblers for embedded PowerPC processors support the same basic mnemonics, but the assembly code accepted by one isn't necessarily accepted by another. Ed Nelson, Ford Research Laboratory; Steve Mihalik, Motorola; *Embedded Systems Programming*, 9/97, p. 64, 9 pp.

**Evaluating benchmarks.** Benchmarks are a valuable tool for measuring performance. But they also can be misleading. Here's an overview of the current state of the benchmarking art. Tom Yager, *NT Systems*, 10/97, p. 41, 6 pp.

**PERIPHERALS**

**An overview of the CAN protocol.** The CAN protocol offers a comprehensive standard for network communications. It supports numerous automotive and industrial-control applications. John Schill, Intel; *Embedded Systems Programming*, 9/97, p. 46, 8 pp.

**PROCESSORS**

**8-/16-/32-/64-bit MCUs/MPUs.** A directory of embedded microprocessors. *Embedded Systems Programming*, Buyer's guide 1997, p. 92, 3 pp.

**EDN's 24th annual  $\mu P/\mu C$  Directory.** EDN's new and improved, largest ever, annual microprocessor/microcontroller directory. Markus Levy, *EDN*, 9/97, p. 34, 60 pp.

**Architecture is dead? Long live architecture!** The business model that has evolved on the presumption of continued architectural heroics will suffer if the pace of CPU advance dwindles. Tom Cantrell, *Computer Design*, 9/97, p. 108, 3 pp.

**Mainstream processors gain DSP features.** With DSP requirements growing, designers have a greater array of choices. Peter Varhol, *Designing for Embedded Systems*, 9/97, p. 29, 3 pp.

**Compressed-code Tiny RISC.** In the embedded world, it's a precarious balance between cost and performance. To maximize memory and reduce cost, try MIPS16, an extension of LSI Logic's TinyRISC family. Bill Jackson, MIPS; Reynaldo Archide, LSI Logic; *Circuit Cellar*, 9/97, p. 30, 3 pp.

**Microprocessors for consumer electronics, PDAs, and communications.** An industry guru surveys the chips that are thriving in the wireless and PDA markets and looks at the features that are important in system design. Jim Turley, MicroDesign Resources; *Embedded Systems Programming*, 10/97, p. 116, 7 pp.

**Embedded control is sparked by introductions at high and low ends.** The 8-bit market is stirred by a new architecture, Atmel's AVR, while 32-bit products feature variations on established themes. Rodney Myrvaagnes, *Electronic Products*, 9/97, p. 31, 9 pp.

**PROGRAMMABLE LOGIC**

**Complex PLDs.** A directory of PLDs with at least 800 gate-equivalents. *Embedded Systems Programming*, Buyer's guide 1997, p. 124, 3 pp.

**Years of strong growth lie ahead for high-density programmable devices.** Experts agree that programmables have a rosy future, but some say standard cells could make inroads down the line. Larry Waller, *Integrated System Design*, 10/97, p. 28, 4 pp.

**SYSTEM DESIGN**

**Perspectives on portable design.** Who says you can't take it with you? Mass storage for portables—both rotating disk and solid state—is expanding in density and variety. Terri Houston, *Portable Design*, 9/97, p. 31, 5 pp.