

## Literature Watch

## Buses

**The impact of CardBus on PC architectures.** As the close cousin of PCI, CardBus is on the roadmap for most next-generation high-performance portable systems. Claude Cruz, National Semiconductor; *IC Card Systems & Design*, 8/95, p. 29, 4 pp.

## Development Tools

**Tools offer a smooth ride on the PCI bus.** Today, a wide range of PCI-specific tools makes your debugging job much easier. Markus Levy, *EDN*, 7/95, p. 29, 7 pp.

**Choosing third-party tools for CPLD and FPGA design.** The programmable-logic market offers tools from established EDA vendors as well as silicon suppliers. Mike Donlin, *Computer Design*, 8/95, p. 93, 5 pp.

## DSPs

**Fixed or floating? a pointed question in DSPs.** The answer may be a trade-off between cost and performance. However, designers must carefully consider a variety of factors before choosing a DSP. Jim Larimer and Daniel Chen, Texas Instruments; *EDN*, 8/3/95, p. 115, 3 pp.

**A distributed arithmetic approach to designing scalable DSP chips.** You can use distributed arithmetic to design DSP chips. Using look-up tables, it lets you develop hardware implementations of DSP algorithms in FPGAs. Bernie New, Xilinx; *EDN*, 8/17/95, p. 107, 7 pp.

**DSP connects with wireless telephony.** Several vendors make DSP chips suitable for cellular telephone systems. Rick Nelson, *EDN*, 8/17/95, p. SS-13, 4 pp.

## Memory

**Flash memories: evaluating density vs. architecture.** Understanding which flash technology is best suited for various applications is a complex but worthwhile process. Pat Henry, AMD; *Electronic Products*, 8/95, p. 27, 4 pp.

**SRAMs offer more dash for the cache.** A rapid move to Pentium has caused SRAM demand to skyrocket while vendors struggle to keep pace. Jeff Child, *Computer Design*, 8/95, p. 118, 7 pp.

**Advanced DRAMs deliver peak systems performance.** Enhancements to the basic DRAM as well as novel architectures push memory bandwidths to new highs. Dave Bursky, *Electronic Design*, 8/7/95, p. 42, 5 pp.

## Miscellaneous

**PCs and telephones start to merge.** All the hardware and software building blocks to turn your PC into a telephone exist today. Richard A. Quinnell, *EDN*, 8/3/95, p. 35, 7 pp.

**Neural nets are bridging the knowledge gap.** Advanced software and hardware tools and proven applications are making neural networks viable alternatives for nonlinear problems. Cheryl Ajluni, *Electronic Design*, 8/7/95, p. 65, 7 pp.

**SPEC as a performance evaluation measure.** The authors challenge the validity of SPEC measures and offer an alternative approach to obtaining these measures. Ran Giladi, Ben-Gurion University, Niv Ahituv, Tel-Aviv University; *IEEE Computer*, 8/95, p. 33, 10 pp.

## Peripherals

**Isochronous LAN standard brings real-time video collaboration to the desktop.** IEEE-802.9a iso Ethernet extends existing LAN standards to provide seamless connectivity over public ISDN networks. Rich Brand, National Semiconductor; *EDN*, 8/3/95, p. 141, 3 pp.

**Ease file transfers with IrDA-protocol wireless infrared.** IrDA-standard point-and-shoot data transfer is convenient and inexpensive. Bill Travis, *EDN*, 7/95, p. 17, 8 pp.

**Data-compression chips get application-specific.** Three companies offer chips that perform lossless data compression in hardware. Jeff Child, *Computer Design*, 8/95, p. 43, 2 pp.

## Processors

**Multithreaded processor architectures.** Independent streams of instructions, interwoven on a single processor, fill otherwise idle cycles and so boost performance. Gregory T. Byrd, MCNC, Mark A. Holliday, Western Carolina University; *IEEE Spectrum*, 8/95, p. 38, 9 pp.

## Programmable Logic

**High-density PLDs.** With fast time to market and off-the-shelf delivery, high-density programmable devices are becoming more attractive as production units. John Gallant, *EDN*, 7/95, p. 5, 5 pp.

**SRAM blocks and antifuse logic combine in new FPGAs.** Actel's A3200 DX series packs up to 3,584 bits of dual-ported RAM and can integrate system functions. Dave Bursky, *Electronic Design*, 8/7/95, p. 115, 3 pp.

## System Design

**PC chipsets bring low chip counts to embedded designs.** PC chip sets can reduce the cost of embedded designs, but many of these designs have a five-year life, while chip sets change every six months. Jeff Child, *Computer Design*, 7/95, p. 46, 2 pp.

**NSP technology promises free multimedia in PCs.** Intel's NSP effort should alert all designers of PCs, motherboards, and add-in cards to the need for unifying the media types in advanced PCs. Maury Wright, *EDN*, 7/20/95, p. 49, 9 pp.

**When computers must not fail.** Newer software and hardware are cutting the price premium for fault tolerance—and none too soon; demand is exploding for computers that just won't quit. Dan Strassberg, *EDN*, 8/17/95, p. 42, 7 pp.

**Designing with microcontroller-based logic.** A microcontroller and a little programming can take the place of a lot of logic parts. Jesse Jenkins, consultant, Dimitrios Douros, Philips Semiconductors; *Embedded Systems Programming*, 7/95, p. 78, 10 pp.