AUDIO/VIDEO

Video-conversion techniques ensure a sharper image. Carefully chosen conversion techniques—for both deinterlacing and modifying the aspect ratio—result in an image of flexible size with no annoying artifacts. Bruce Intihar, Genesis Microchip; *EDN*, p. 97, 7 pp.

Maximizing AGP performance. AGP is one of the key enabling technologies for high-performance 3D graphics applications running on desktop PCs. Jim Chu and Frank Hady, Intel; *RTC*, 3/98, p. 83, 6 pp.

BUSES

High-speed datapaths bypass bus bottlenecks. To increase data rates and retain the advantages of the bus system, designers are bypassing the bus and directly transferring data between subsystems. Warren Webb, *EDN*, 3/26/98, p. 54, 4 pp.

CPU

Choosing an embedded microprocessor. Selecting a processor for your embedded design takes a little hunting. There's no dominant choice. Performance, power, and market considerations will drive your decision making. Jim Turley, MicroDesign Resources; *Computer Design*, 3/98, p. 6, 6 pp.

The low-powered microprocessor solution. The Xemics 8-bit CoolRISC manages to offer both low power and fast execution. Vincent Rikkink, *Circuit Cellar*, 4/98, p. 22, 6 pp.

Part 1: An old friend comes to visit. Part 1 brings us up to date with the Z8 family developments. Jeff Bachiochi, *Circuit Cellar*, 4/98, p. 74, 7 pp.

DSP

The expanding world of DSPs. Digital signal processors are going mainstream with a variety of architectures, on-board peripherals, and memory for the discriminating designer. Krishna Yarlagadda, *Computer Design*, 3/98, p. 77, 10 pp.

IC DESIGN

Embedded memory: the all-purpose core. Designing on-chip volatile and nonvolatile memory into your next ASIC can give you a number of benefits. Brian Dipert, *EDN*, 3/13/98, p. 34, 11 pp.

ESL design entry delivers a chip primed for reuse. Shifting to an HDL design methodology within a tight schedule, to allow reuse, called for a versatile design-entry tool. David Tonks, *Integrated System Design*, 3/98, p. 28, 4 pp.

Clock-tree generator meets the needs for high-speed deep-submicron design. By optimizing clock trees based on physical placement information, a new-generation clock-tree generator will help Toshiba avoid timing failures. Mohammad Mohsin and Richard Feaver, *Integrated System Design*, 3/98, p. 36, 3 pp.

The art of embedding SRAM. Designers must weigh performance, cost, and functionality trade-offs before choosing an appropriate design flow and testability methodologies. Ron DiGiuseppe, *Integrated System Design*, 3/98, p. 42, 4 pp.

Focus report: physical verification tools. The downpour of data from accurate physical analysis threatens design productivity. New tools seek to shore up the design flow. Gil Bassak, *Integrated System Design*, p. 50, 6 pp.

Hardware design and software tools grow from one source. Using SD/Toolsmith, processor architecture can be defined at the same time designers create the tools to write the code. Tom Williams, *Electronic Design*, 3/23/98, p. 44, 4 pp.

MEMORY

Graphics-optimized DRAMs deliver top-notch performance. RDRAMs, SGRAMs, DDR SGRAMs, and other new memories answer the demand for faster speeds at lower power. Dave Bursky, *Electronic Design*, 2/23/98, p. 89, 6 pp.

MISCELLANEOUS

Deploying Windows CE. Windows CE holds significant promise as a development and run-time platform for embedded system designers with tight time-to-market constraints. Sean Liming, Annasoft Systems, Sal Quintanilla, System Design Group; *RTC*, 3/98, p. 31, 2 pp.

SYSTEM DESIGN

Interface issues deter faster adoption of flat-panel displays. Flat-panel displays (FPDs) are getting ready to replace CRTs as the display of choice in desktop PCs. Manju Nath, *EDN*, 3/13/98, p. 69, 5 pp.

Real-time prototyping settles the design of a mobile handset. A system prototype using programmable emulation hardware and FPGAs made it practical to iron out the bugs of a CDMA telecom design before fabricating silicon. Stelios Podimatis, *Integrated System Design*, 3/98, p. 18, 5 pp.

Embedding PC Card. With PC Cards, the designer gains many additional resources without the cost of incorporating all the functionality in everyone's product and without having to "buy" more real estate. Fred Eady, *Circuit Cellar*, 3/98, p. 53, 5 pp.

Information appliances: from Web phones to smart refrigerators. Embedded information processors are spawning many unexpected applications as they use LAN and Internet protocols to communicate across almost any network. Lee Goldberg, *Electronic Design*, 3/23/98, p. 69, 8 pp.

Pentium II SBCs: Back to the drawing board for S.E.C. cartridge? When Intel first showed developers the new S.E.C. cartridge, it soon became obvious that significant changes would be needed to accommodate the cartridge in SBC layout. Roger Hurlbert, Trenton Technology; *RTC*, 3/98, p. 21, 2 pp.