Literature Watch

Buses

PCMCIA : past, present, and promise. An update on the PCMCIA standard, current players and products, potential plug-and-play extensions, and support in Windows 95. John Bryan, *BYTE,* 11/94, p. 65, 5 pp.

PCI to take over the world? Not if, but when. Local buses are the fastest way to pass data between the CPU and specialized peripherals. But true interoperability between motherboards and insert cards will depend on how vendors implement the standards. Stephan Ohr, *Computer Design,* 11/94, p. 41, 7 pp.

Development Tools

High-res digitizer cards push up on speed, down on price—but watch accuracy specs! A survey of data-acquisition cards with 16 or more bits of resolution. Paul G. Schreier, *Personal Engineering,* 11/94, p. 27, 8 pp.

Graphics

Chip set combines audio, video, and graphics. Brooktree's MediaStream chip set uses four devices and 1M of VRAM to handle three data types. Richard Nass, *Electronic Design,* 10/25/94, p. 69, 3 pp.

Memory

The future of flash storage. New flash memory technologies include multichip modules, vertical silicon interconnect, and multilevel cell (ML-C) devices to increase storage capacity. *Computer Design,* 11/94, p. OEM-14, 4 pp.

Fragmentation ahead for advanced DRAMs. A survey of alternative and high-performance DRAMs on the market today. Jeff Child, *Computer Design,* 11/94, p. 101, 4 pp.

Miscellaneous

Interview with Andy Grove. The president and CEO of Intel on ATM, ISDN, video applications, and the future of PC-centric communications. Girish Mhatre, *OEM Magazine,* 10/94, p. 53, 3 pp.

Smarter copiers, printers and fax devices are coming. A look at two forthcoming operating systems for embedded office products: Microsoft At Work and Novell Embedded Systems Technology (NEST). Andy Reinhardt, *BYTE,* 11/94, p. 81, 5 pp.

Emergence of the RISC PC. Dataquest says that RISC PC sales will grow at an annual rate of about 200% from 1993 through 1998. RISC PC vendors will have to fight off competition from both traditional workstations and Pentium PCs. Dominic Ricchetti, Dataquest; *OEM Magazine,* 10/94, p. 38, 7 pp.

Compression techniques encode audio signals for digital processing. By using lossy or lossless compression algorithms, you can substantially reduce bandwidth requirements for digitally encoded audio and voice signals. Paul M. Klein, DSP Software Engineering; *EDN,* 10/13/94, p. 97, 3 pp.

Batteries explode into new applications and new chemistries. Archaeologists have found the remains of batteries in ancient Grecian ruins, yet, despite batteries' venerable age, significant new developments in chemistries, control techniques, and construction methods abound. Charles H. Small, *EDN,* 10/13/94, p. 63, 6 pp.

Processors

Designer's guide to next-generation µPs that run x86 applications. One of the designers of Cyrix's M1 discusses the design options for high-performance x86-compatible microprocessors. Peggy Herubin, Cyrix; *EDN,* 10/13/94, p. 129, 5 pp.

Competitive urges. With more and more processors running above the 50-MHz clock threshold, getting data on and off a chip is becoming a nightmare. Tyler Sperry, *Embedded Systems Programming,* 11/94, p. 9, 2 pp.

AMD vs. Superman. The quad-issue K5 series is AMD's long-awaited answer to Intel's Pentium. Its RISC-like core and approach to x86 decoding may propel it past the Pentium of today, but Intel isn't standing still. Tom R. Halfhill, *BYTE,* 11/94, p. 95, 6 pp.

SPARC strikes back. UltraSparc moves SPARC to 64 bits while providing a host of video and graphics capabilities. Peter Wayner, *BYTE,* 11/94, p. 105, 5 pp.

PowerPC 620 soars. Its faster logic, shorter pipelines, and high-speed interface endow it with processing power that raises it to workstation and server caliber. Tom Thompson and Bob Ryan, *BYTE,* 11/94, p. 113, 5 pp.

T5: brute force. MIPS Technologies' T5 chip takes an aggressive approach to superscalar dispatch that shows how far today's engineers must go to deliver cutting-edge performance. Tom R. Halfhill, *BYTE,* 11/94, p. 123, 4 pp.

Programmable Logic

Shooting down the true lies in FPGA synthesis benchmarking. An analysis of current FPGA benchmarks, including PREP, and why EDA vendors don't want to talk about them. John Cooley, EDA Consumer Advocate; *EDN,* 10/27/94, p. 39, 7 pp.

Stoke the fires of FPGA design. Keep an FPGA's architecture in mind and produce designs that will yield optimum performance and efficiency. John Nemec, Cypress Semiconductor; *Electronic Design,* 10/25/94, p. 97, 6 pp.

Get ready to design with new-generation, BiCMOS-based 3.3-V PLDs. When designing with the coming generations of 3.3-V PLDs, an understanding of the inherent characteristics of BiCMOS and pure-CMOS designs will help you optimize performance. Ron Cline, Philips Semiconductor; *EDN,* 10/25/94, p. 117, 4 pp.

