Literature Watch

Buses

Don't let the new interfaces get ya! Emerging standards for PC interfaces include Enhanced IDE, Ultra SCSI, SSA, FireWire, and Fiber Channel. Terry Costlow, *OEM Magazine,* 2/95, p. 52, 5 pp.

Plug & play. Nearly every bus used in PCs is being modified to allow users to add devices without manual reconfiguration. Dan Strassberg, et al, *EDN,* 3/2/95, p. 33, 9 pp.

SCSI host adapters feature PnP capabilities. 16-bit CD-quality wavetable audio is incorporated into one of the plug-and-play SCSI host adapters. Richard Nass, *Electronic Design,* 3/6/95, p. 139, 2 pp.

Mezzanine buses bring backplane benefits to the board level. While promising flexible designs, a profusion of mezzanine buses—from Corebus to SBX—has diluted these buses' value. Richard A. Quinnell, *EDN,* 3/2/95, p. 67, 6 pp.

Development Tools

DRC tools move into the mainstream. With ASIC and PC-board designs growing more complex, design-rule checkers (DRCs) are being used more widely. Mike Donlin, *Computer Design,* 3/95, p. 40, 3 pp.

DSPs

New DSP architecture carries 155-Mbit/s ATM over voice-grade unshielded twisted-pair wiring. Researchers at Silicon Design Experts have employed an innovative technique to drive high-speed data through inexpensive connections. Lee Goldberg, *Electronic Design,* 2/20/95, p. 36, 2 pp.

Graphics/Video

Multimedia super hero. Jon Peddie surveys a new crop of multimedia silicon that he calls video graphics controllers. Jon Peddie, PC Graphics Report; *OEM Magazine,* 2/95, p. 42, 5 pp.

Memory

DRAM vendors juggle with new architectures to increase performance. As microprocessor speeds outpace DRAM access times, a host of new DRAM designs promises to fill this gap. Jeff Child, *Computer Design* 3/95, p. 71, 9 pp.

Miscellaneous

Advanced packaging becomes practical for portables. Chip-on-board (COB), multichip modules (MCMs), and area-array surface-mount IC packages increase density—if you're willing to pay the price. Frank Caruthers, *Computer Design,* 3/95, p. 99, 6 pp.

Smart-battery technology: power management's missing link. The technology now exists to provide batteries with varying degrees of smarts, forming a critical link between the battery and host equipment. Anne Watson Swager, *EDN,* 3/2/95, p. 47, 9 pp.

Process, material, and standards advances propel the manufacture of latest displays. The recent Display Manufacturing Technology Conference (DMTC) revealed the latest advances in flat-panel displays and CRTs. Cheryl Ajluni, *Electronic Design,* 2/20/95, p. 33, 3 pp.

Gigabit DRAMs, 64-bit CPUs and more at ISSCC. With the 1-Gbit barrier now breached, lessons learned will soon be applied to CPUs, multimedia chips, and other logic circuits. Dave Bursky, *Electronic Design,* 2/20/95, p. 61, 13 pp.

Taligent's CommonPoint: the promise of objects. Taligent has introduced what promises to be a revolutionary software environment: CommonPoint's object-oriented frameworks. Ware Myers, *IEEE Computer,* 3/95, p. 78, 6 pp.

Digital Equipment: not out of the woods yet. The severely wounded systems maker is profitable but remains troubled. An uneven product development process still needs work. Larry Marion, *Electronic Business Buyer,* 3/95, p. 48, 5 pp.

The electronic motorist. Now is the time for novel technology—navigation gear, night vision, fuzzy logic, and more—to come to the car driver's aid. Ronald K. Jurgen, *IEEE Spectrum,* 3/95, p. 37, 10 pp.

Peripherals

Communications technologies going to silicon at ISSCC. Wired and wireless communication industries get a boost as new technologies evolve from lab prototypes to highly integrated chips. Lee Goldberg, *Electronic Design,* 2/20/95, p. 95, 5 pp.

Audio-IC technologies tackle new challenges. Yamaha, Philips TriMedia, and others address this growing market. Cheryl Ajluni, *Electronic Design,* 2/20/95, p. 47, 5 pp.

Processors

Voice recognition chip does it all. Oki's MSM6679 Voice Recognition Processor (VRP) uses a 16-bit CPU and specialized hardware but sells for less than $24. *Computer Design,* 3/95, p. 126, 1 pp.

Redesigned RISC CPUs trim power, up speed. Toshiba's R3900 and Hitachi's SH3 deliver 1 MIPS per MHz at milliwatt power levels. Dave Bursky, *Electronic Design,* 3/6/95, p. 142, 3 pp.

RISC proponents look for ways to oust CISC microcontrollers. Memory requirements and programming hurdles inhibit RISC in many control applications, but that's not stopping some suppliers. Robert Ristelhueber, *Electronic Business Buyer,* 3/95, p. 39, 6 pp.

System Design

Design a multi-DSP system with just one bus. A creative bus-arbitration circuit controls the I/O activity for multiple DSP devices running in parallel. Theo Mulder, *Electronic Design,* 3/6/95, p. 73, 5 pp.

Defuse the threat of ESD damage. Electrostatic discharge need not be an IC-killing time bomb, given some careful design work. William Russell, *Electronic Design,* 3/6/95, p. 115, 4 pp.