LITERATURE WATCH

AUDIO/VIDEO

3D audio technologies provide realistic sound. Several vendors provide chips and software for high-end audio. Dave Bursky, *Electronic Design,* 11/4/96, p. 79, 10 pp.

BUSES

Is PCI becoming the de facto embedded computer bus? PCI in embedded applications may soon eclipse its application on the desktop, if some of the forecasts by industry leaders at Intel and Microsoft turn out to be correct. Warren Andrews, *RTC,* 11/96, p. 15, 3 pp.

FDDI lives on as backbone LAN, switch. Switched FDDI—combining FDDI with crossbar connections—has been a huge winner. Ray Weiss, *RTC,* 11/96, p. 71, 3 pp.

USB: A neat package with a few loose ends. Early USB adopters may face a substantial system-level design effort. They also need to carefully examine USB data-bandwidth characteristics. Richard A. Quinnell, *EDN,* 10/24/96, p. 39, 11 pp.

MEMORY

Specialty memories: Mainstream of the future? Addressing bandwidth problems in graphics and other premium areas, unusual devices test possible approaches to mainstream problems. Rodney Myrvaagnes, *Electronic Products,* 10/96, p. 25, 4 pp.

MISCELLANEOUS

How Intel did it. Rich enough to fund its army with the best tools and technology, the chip giant has by many accounts won the microprocessor war. But will Intel's old strategy keep working if the nature of the battle changes? Robert Ristelhueber, *Electronic Business Today,* 10/96, p. 38, 5 pp.

PCS: Not just another cell phone. Thanks to the availability of low-cost digital chip sets, PCS is now becoming affordable and finding use in fax, e-mail, and palmtop computer functions. Stephen Kempainen, *EDN,* 11/21/96, p. 65, 8 pp.

The scoop on Java. Java has far-reaching possibilities that range from commercial transaction systems to set-top boxes and embedded applications. Markus Levy, *EDN,* 11/7/96, p. 73, 9 pp.

Did you hear what I said? Speech recognition continues to evolve, but work still needs to be done so it can understand us enough of the time. Paul McGoldrick, *Electronic Design,* 10/1/96, p. 37, 5 pp.

PERIPHERALS

Advanced POTS modems: Mr. Moore, meet Mr. Shannon. The new generation of feature-laden modems is much smarter, thanks to new technologies and standards that will help them deliver voice, video, and data well into the next century. Lee Goldberg, *Electronic Design,* 10/1/96, p. 77, 7 pp.

Chip set targets the universal serial bus. Philips deploys first USB chip set of hub, transceiver, and codec. Peter Fletcher, *Electronic Design,* 11/4/96, p. 69, 4 pp.

Disk drives at 40: Lean, mean storage machines. New drives stretch to 9-Gbyte storage capacities and achieve data-transfer rates approaching 150 Mbps. Maury Wright, *EDN,* 11/7/96, p. 51, 9 pp.

Communications chip sets speed system design. Standards-based products bring greater integration to wireless, datacom, and satellite-broadcast applications. David Morrison, *Electronic Products,* 11/96, p. 27, 5 pp.

Single-chip codec brings advanced multimedia to PCs. SGS-Thomson's STLC-7549 integrates all of the necessary analog functions, including CD-quality audio, telephony, and a V.34bis modem that handles digital simultaneous voice and data. Peter Fletcher, *Electronic Design,* 10/1/96, p. 67, 5 pp.

PROCESSORS

Workhorses of the electronic era. Today's microcontrollers are performing better than ever through their use of high-level languages and multitasking techniques. Ata R. Khan, Philips; *IEEE Spectrum,* 10/96, p. 36, 5 pp.

RISC takes gold in processor Olympics. 32-/64-bit RISCs, especially superscalars, claim virtually all the desktop, server, and workstation turf and are moving toward the embedded-systems high ground. Ray Weiss, *Computer Design,* 11/96, p. 61, 8 pp.

Multiprocessor validation of the Pentium Pro. Intel developed an extensive test methodology for functional and performance validation. Deborah T. Marr, Subramanian Natarajan, Shreekant Thakkar, Richard Zucker, Intel; *Computer,* 11/96, p. 47, 7 pp.

PROGRAMMABLE LOGIC

Embedded memory enhances programmable logic for complex, compact designs. Vendors are responding with devices that incorporate memory as well as logic gates. Rick Nelson, *EDN,* 11/7/96, p. 91, 7 pp.

Logic that mutates while-u-wait. Dynamically reconfigurable logic—designs whose function can be customized to a particular system or application on the fly—brings possibilities with hairy challenges. Clive Maxfield, *EDN,* 11/7/96, p. 137, 5 pp.

SYSTEM DESIGN

Silicon vendors to seek future profits inside DVD drives. Silicon vendors will mix and match functional DVD blocks to provide cost advantages to the drive manufacturer. Dave Wilson, *Computer Design,* 10/96, p. 32, 2 pp.

Blocking in a system on a chip. Standard, pre-existing components from suppliers of intellectual property will be mixed and matched on a single IC. Merrill Hunt, James A. Rowson, Cadence; *IEEE Spectrum,* 11/96, p. 35, 7 pp.