

LITERATURE WATCH

BUSES

CardBus configuration: a two-step process. A CardBus card combines the low power, small form factor, and light weight of a PC Card with the performance of PCI. However, proper configuration is essential to gain the full benefits of this device. Tom Shanley, Mindshare; *EDN*, 5/9/96, p. 111, 6 pp.

DEVELOPMENT TOOLS

Putting your money on Windows-based tools. Windows-based EDA tool development has boomed since the introduction of Windows 95. Jim Lipman, *EDN*, 5/23/96, p. 51, 7 pp.

DSPS

Avoiding DSP performance problems up front. This second half of a two-part article discusses optimal use of digital filters and A/D converters in DSP system design. Gene Pikus, Alliant Techsystems; *Electronic Design*, 5/13/96, p. 83, 7 pp.

New vocoder modeling doubles recording time. TI's MSP58C83x handles voice compression in a digital telephone answering machine. Paul McGoldrick, *Electronic Design*, 5/13/96, p. 139, 3 pp.

GRAPHICS/VIDEO

Multimedia decoder chip adds a hot "SPARC" to DVD. DVD applications will enjoy added performance and flexibility, thanks to a single-chip decoder that packs an embedded MicroSparc processor. Peter Fletcher, *Electronic Design*, 5/13/96, p. 59, 5 pp.

Frame-buffer wars: new directions in PC graphics. The battle between the dedicated frame buffer and the UMA is a skirmish in the old war between available bandwidth and bandwidth consumption and between cost and performance. David Kocsis, Oak Technology; *EDN*, 5/23/96, p. 121, 5 pp.

MEMORY

Content-addressable memories add processing power to embedded systems. CAMs enable you to apply associative processing to designs that require list searches and data translation. Tom Weldon, Music Semiconductors; *EDN*, 5/9/96, p. 137, 10 pp.

MISCELLANEOUS

Java: virtual machine for virtually any platform. Java appears attractive for embedded applications but needs enhancements for any real-time work. Simon Waddington, Stephan Li, Wind River; *Embedded Systems Programming*, 6/96, p. 27, 10 pp.

Digital TV: please stand by. Outfitting today's terrestrial broadcast networks for digital will be a costly undertaking, to say nothing of the many political battles that still lie ahead. George Leopold, *OEM Magazine*, 5/96, p. 24, 9 pp.

The interview: Bill Gates.

Gates shares his views on Microsoft's push toward the consumer PC, a revived PDA program, the on-again relationship with Intel, and the bandwidth problem. Rick Boyd-Merritt, *OEM Magazine*, 5/96, p. 37, 6 pp.

A balancing act in displays.

For designers of handheld systems, the display picture has been either a dim or a costly one, but that scenario could change with some new flat-panels on the horizon. David Lieberman, *OEM Magazine*, 5/96, p. 62, 9 pp.

PROCESSORS

Multimedia instructions boost host-based processing. Multimedia instructions capitalize on a CPU's capability to perform parallel processing. Markus Levy, *EDN*, 5/23/96, p. 67, 9 pp.

The new 8051s. Intel's venerable 8051 has been updated over the years and has more recently inspired a variety of derivatives. Jan surveys the current field of 8051s and derivatives from Intel, Dallas, and Philips. Jan Axelson, Intel; *MicroComputer Journal*, 6-7/96, p. 9, 8 pp.

Using the 68HC11 SPI. The 68HC11 Serial Peripheral Interface allows data exchange rates of 1 Mbps using as few as three wires. Karl explains this little-understood but powerful subsystem at the register level. Karl Lunt, *MicroComputer Journal*, 6-7/96, p. 42, 6 pp.

SYSTEM DESIGN

Mixed-signal designs complicate debugging. Increasing use of both analog and digital signals on the same board is causing probing and crosstalk problems. John Novellino, *Electronic Design*, 5/13/96, p. 46, 5 pp.

Low-dropout regulators get application specific. Offspring of the ubiquitous three-pin linear regulators now target microprocessors and cellular telephones. Frank Goodenough, *Electronic Design*, 5/13/96, p. 65, 10 pp.

DSP software helps build a speakerphone. A full-duplex speakerphone can be designed using a 56002 DSP and PC Media technology. John Lane, Dan Hoory, et al, Motorola; *Electronic Design*, 5/28/96, p. 110, 6 pp.

Low-power system design: selecting the right μ P. Guidelines for choosing a low-power CPU. J.S. Holmes, Boehringer Mannheim Corp.; *Electronic Design*, 5/28/96, p. 87, 4 pp.

Environmentally hardened PCs: how much is enough? Getting industrial PCs to measure up to all the standards required in embedded and industrial environments is a two-part problem. The first is to identify the conditions it has to meet, and the second is to make sure the technology is available. Warren Andrews, *RTC*, 5/96, p. 77, 2 pp.