LITERATURE WATCH

DEVELOPMENT TOOLS

ICEs to target higher clock rates, more processors. Many CPU vendors are either building their own in-circuit emulators or adding on-chip debuggers or JTAG-based emulators. Ray Weiss, *Computer Design* , 2/96, p. 59,
4 pp.

Windows-based EDA tools: shifting into high gear. Some believe that EDA tools will be moving *en masse* from Unix-based platforms to desktop PCs. However, reports of Unix's death are greatly exaggerated. Jim Lipman, *EDN,* 2/1/96, p. 43, 10 pp.

IC tool creates a floorplan from HDL code. A high-level design planner uses RTL descriptions to predict an IC's size, timing, and power consumption before synthesis. Lisa Maliniak, *Electronic Design,* 2/19/96, p. 165, 3 pp.

Windows ensembles charge up C/C++ code for 8- and 16-bit microcontrollers. Several vendors supply PC-based compiler/debuggers for popular microcontrollers. Russ Lindgren, *Personal Engineering,* 2/96, p. 39, 4 pp.

DSPS

Choosing FPGAs, ASICs, or cores for DSP-based system design. For your DSP applications, you can use FPGAs with programmable DSPs, hardwire DSP algorithms into ASICs, or for high-volume applications, use DSP cores. Barbara Tuck, *Computer Design,* 2/96, p. 85, 7 pp.

GRAPHICS/VIDEO

Multimedia ICs. A sampling of recently released ICs for multimedia applications. *Electronic Products,* 2/96, p. 43, 5 pp.

PCs step into 3D. The journey into the world of three-dimensional computing will be a difficult one for PC makers, according to the publisher of the *PC Graphics Report.* Jon Peddie, Jon Peddie Associates; *OEM Magazine,* 2/96, p. 53, 6 pp.

MEMORY

Memories hit new highs and clocks run jitter-free. ISSCC featured gigabit DRAMs, fast SRAMs, and 128-bit flash chips. Dave Bursky, *Electronic Design,* 2/19/96, p. 79, 8 pp.

My memory is not what it used to be: testing RAMs and ROMs. Testing memory devices in situ on a circuit board requires subtlety, mental gymnastics, lateral thinking, and hard work. Clive "Max" Maxfield, *Computer Design,* 2/1/96, p. 153, 2 pp.

MISCELLANEOUS

Passive LCD still dominates flat-panel displays. Its many iterations and improvements offer users a wide range of options for their display applications. Edward D. Surjan, Jr., Crystaloid; *Electronic Products,* 2/96, p. 27, 4 pp.

PERIPHERALS

Chip sets and MMICs ease short-haul RF-link design. New chip sets and MMICs (monolithic microwave ICs) simplify designing wireless systems. Bill Schweber, *EDN,* 2/15/96, p. 46, 8 pp.

PROCESSORS

Advanced CPUs, multimedia ICs deliver top throughputs. Multihundred-MIPS RISC processors and GOPS-capable multimedia chips appear at ISSCC. Dave Bursky, *Electronic Design,* 2/19/96, p. 55, 10 pp.

Drop in a complete digital answering-machine controller. Zilog's Z89175 integrates a DSP with a Z8 controller. *Computer Design,* 2/96, p. 112, 1 pg.

PIC aims at mixed-signal control. Microchip's PIC 14000 combines a low-cost 8-bit CPU with analog I/O. *Computer Design,* 2/96, p. 110, 1 pg.

2-V 8-bitter packs in peripherals. S-MOS 88316 consumes just 5 mW at 4.1 MHz. *Computer Design,* 2/96, p. 118, 1 pg.

PROGRAMMABLE LOGIC

FPGAs continue to break density barriers. The Xilinx 4000EX family and Crosspoint's Crossfire line each offer densities of 20,000 to 100,000 gates. Mike Donlin, *Computer Design,* 2/96, p. 40, 2 pp.

SYSTEM DESIGN

STB operating systems gear up for flood of data services. As the digital revolution moves into the homes of consumers, the set-top box (STB) will become the hub of data and entertainment services. Tom Williams, *Computer Design,* 2/96, p. 67, 8 pp.

The battle over UMA begins to heat up. With Unified Memory Architecture chip sets out and systems set to appear, arguments mount over the extent of performance degradation and end-user acceptance. Lawrence J. Curran, *Electronic Business Today,* 2/96, p. 49, 3 pp.

DSPs to replace dedicated hardware. Low-cost DSPs give designers a new weapon with which to attack the familiar problems of cost, power, and flexibility. Glen Chagnot, MCC/NORSAL; *Embedded Systems Programming,* 2/96, p. 52, 8 pp.

Modernize your memory subsystem design. As processor speeds increase and more demands are placed on memory bandwidth, second-level caches continue to be an important design consideration. David Barringer, Ray-mond Leong, et al, Cypress Semiconductor; *Electronic Design,* 2/5/96, p. 83, 5 pp.

The embedded PC learns to fly. To find out how easy it is to use a PC as an embedded system, EDN designed an airborne surveying system. David Shear, *EDN,* 2/15/96, p. 85, 12 pp.

Designing high-speed, pipelined multiprocessor systems. High-speed CPUs, which contain features such as decoupled buses, greatly enhance your ability to develop multiprocessor systems. Gregg Mack, Matt Carlson, et al, Motorola; *EDN,* 2/15/96,
p. 151, 6 pp.