Literature Watch

Buses

VME gets facelift with new-generation processor. Motorola offers VME cards based on PowerPC 603 and 604 RISC processors, while the PCI-based motherboard allows other processors to be used. Warren Andrews, *Computer Design,* 7/94, p. 38, 2 pp.

Development Tools

Program generators turn graphical ideas into source-code modules for embedded tasks. Several tools are available that help programmers visually conceptualize software operation for embedded source-code design. Russ Lindgren, *Personal Engineering,* 7/94, p. 35, 6 pp.

Memory

Hot shots in new memory game. Specialized DRAMs for particular applications are finding favor over standard DRAMs and include devices like the SDRAM (synchronous DRAM) and the RDRAM (Rambus DRAM). Mike Elphick, *OEM Magazine,* 7–8/94, p. 76, 5 pp.

Faster processors ignite SRAM revolution. Specialty SRAMs provide components to cache designers meeting demands of ever-faster microprocessors. Jeffrey Child, *Computer Design,* 7/94, p. 97, 3 pp.

Miscellaneous

Adopting multichip-module technology. Multichip modules are worth a look to improve density and speed, but testing must not be ignored. Shiv C. Tasker, Cadence Design Systems, Zoran Sekulic, Integrated Measurement Systems; *Electronic Design,* 6/27/94, p. 153, 5 pp.

Silicon-carbide process yields high-temperature ICs. Any silicon foundry should be able to fabricate ICs with three times the heat range of conventional silicon ICs by using GE's silicon-carbide process; other benefits are predicted as well. David Maliniak, *Electronic Design,* 6/27/94, p. 44, 2 pp.

Better management led to better numbers. As electronics industry sales increased moderately by 6.4% in 1993, net income nearly tripled to $45.8 billion, resulting from increased productivity with reduced manufacturing and materials costs. Vanessa Craft, *Electronic Business Buyer,* 7/94, p. 46, 16 pp.

Parallel visualization algorithms: performance and architectural implications. Multiprocessors supporting shared data improve image synthesis algorithms and visualization. Jaswinder Pal Singh, Anoop Gupta, et al, Stanford University, *IEEE Computer,* 7/94, p. 45, 11 pp.

Known-good die for the same cost as packaged ICs. Intel's known-good die program, SmartDie, offers die tested to meet AC and DC parametric tests over 0°C to +80°C at the same cost as packaged equivalents. Spencer Chin, *Electronic Products,* 7/94, p. 19, 1 pp.

Peripheral Chips

Fast Ethernet is up to speed. Fast Ethernet is gaining support in the transition to Asynchronous Transfer Mode. Barry Phillips, *OEM Magazine,* 7–8/94, p. 11, 3 pp.

Vitesse, Tricord team to enable 12-Pentium multiprocessing. Gallium-arsenide cache-controller chip set supports 12 Pentium 60/90-MHz or 66/100-MHz processors and gives zero-wait-state performance. Jeff Child, *Computer Design,* 7/94, p. 26, 1 pg.

Hue and cry for color stirs flat-panel makers. Demand for color in flat-panel displays is strong, and mobile computing makes demands on technology. Frank Caruthers, *Computer Design,* 7/94, p. OEMI-11, 5 pp.

Processors

Controller manages power and keyboards. The power and human interface of portable systems can be managed by an 8-bit microcontroller, the Hitachi H8/3437 IKAP-II, that offloads the host. Dave Bursky, *Electronic Design,* 6/27/94, p. 181, 3 pp.

Workstation makers fight the PC challenge. Many CAE users like the low cost and performance of Pentium and PowerPC. James Carbone, *Electronic Business Buyer,* 7/94, p. 109, 3 pp.

SPECmark of the month. The MIPS R8000/R8010 two-chip set is a building block for supercomputers, as in the new Silicon Graphics Power Challenge. Rodney Myrvaagnes, *Electronic Products,* 7/94, p. 22, 2 pp.

Massively parallel supercomputer sets record of 143.4 double-precision GFLOPS. Intel i860XP CPUs in a 31-cabinet Sandia Labs Paragon supercomputer crack record by 15% but leave room for the future with Linpack. Clifford Meth, *Electronic Design,* 6/27/94, p. 46, 2 pp.

System Design

Integrate PCMCIA sockets into desktops. Meeting design challenges when integrating PCMCIA sockets into desktop systems. Henry Fung, Vadem;*Electronic Design,* 7/11/94, p. 113, 4 pp.

Touch screens for portables. Resistive, electrostatic, and electromagnetic technologies are the leaders for touch handheld devices. R.D.R. Hoffman, *OEM Magazine,* 7–8/94, p. 66, 4 pp.

Rechargeable lithium cells: power to burn for portables. While Li-Ion and Li-Poly cells possess the greatest energy (weight) density of all batteries, design considerations must address areas including misuse protection and precise charging circuits. Chester Simpson, *OEM Magazine,* 7–8/94, p. 66, 4 pp.

