AUDIO/VIDEO

Multimedia ICs strive for adaptability. Requirements are still unsettled, so programmability is important for reasonable product life. Rodney Myrvaagnes, *Electronic Products*, 6/97, p. 31, 3 pp.

BUSES

Alternatives for smart-battery serial buses. There are alternatives to the popular SMBus for smart-battery-to-host communications in notebooks. Dale Stolitzka, National Semiconductor; *Portable Design*, 6/97, p. 40, 3 pp.

CPCI: is it live or is it... Giving credence to CompactPCI are major announcements from Motorola, Force, RadiSys, and Alta Technology. *RTC*, 6/97, p. 47, 2 pp.

IC DESIGN

Logic synthesis for the next generation. Chromatic Research examines whether a new logic-synthesis tool can handle the growing complexity of its full-custom media processors. Michael Klein, Chromatic Research; *Integrated System Design*, 6/97, p. 74, 3 pp.

The IP revolution reaches programmable logic. Integrating intellectual property with programmable logic creates new choices for product designers. It can boost performance or use 90% less chip real estate. Peter Varhol, *Computer Design*, 6/97, p. 70, 4 pp.

Use single-phase clocking to improve DSP core testability. Early DSP cores used transparent latches and two-phase clocking to achieve 85% fault coverage. Now designers can enjoy 99% fault coverage by taking the edge-triggered, single-phase clocking route. Walter Croce and Christian Joly, LSI Logic; *Electronic Design*, 5/27/97, p. 34, 5 pp.

MISCELLANEOUS

Embedded designers need to take a fresh look at Java. Java has a number of features, like scalability and multithreading, that make it inherently attractive for embedded systems. *The EDN Focus Series*, 6/19/97, p. 35, 6 pp.

Voice processing and computer telephony: where applications and standards meet. Software and hardware initiatives by computer giants like Microsoft and Intel have signaled the importance that computer telephony will have in future systems. Alan Eng, Dialogic; *RTC*, 6/97, p. 73, 3 pp.

NT 4.0 memory management. NT's memory management system seeks the right balance between stability and performance. Steven J. Vaughan-Nichols, *Windows NT Systems*, p. 24, 6 pp.

PERIPHERALS

Boarding the bus: USB for portable PCs. A Universal Serial Bus peripheral controller can take the place of today's portable keyboard controllers while reducing cost and adding features and flexibility. Paul Novell, Cypress Semiconductor; *Portable Design*, 6/97, p. 38, 2 pp.

I_2O gains silicon support: PLX and V3 launch I_2O-ready PCI controllers. I_2O, the Intelligent I/O software initiative sponsored by Intel and other PC big guns, is gaining critical industry support. *RTC*, 6/97, p. 53, 2 pp.

PROCESSORS

Roll your own processor. Don't buy a chip, buy a chip recipe. Microprocessor designers are building tailored CPU cores and selling the VHDL. The advantages are many. Rick Grehan, *Computer Design*, 6/97, p. 88, 2 pp.

Flash and EEPROM technologies combine on feature-rich MCUs. By adding flash memory along with EEPROM storage, MCUs gain improved system flexibility. Dave Bursky, *Electronic Design*, 5/27/97, p. 81, 8 pp.

VMEbus CPUs: the microprocessors that drive VME applications. A directory of the major VME CPUs, including 68K, PowerPC, Alpha, MIPS, SPARC, and Pentium. Ray Weiss, *RTC*, 6/97, p. 17, 7 pp.

Integrated PCI in Sun Microsystems' embedded processors. The UltraSparc i-Series and the MicroSparc-IIep are the first processors to incorporate a fully integrated industry-standard PCI bus. *RTC*, 6/97, p. 35, 3 pp.

Diversity, thy name is RISC. The problem facing designers today is to choose a processor or a controller from among the multiple variants in the Alpha, ARM, StrongARM, HP-PA, i960, MIPS, PowerPC, SH-1/2/3, SPARC, SPARClite, V851/2/3, x86, and 68xxx families. *The EDN Focus Series*, 6/19/97, p. 25, 5 pp.

PROGRAMMABLE LOGIC

Keep PLD designs on track with step-by-step planning. An effective programmable logic design requires attention to details, including logic techniques, testability, simulation, and choosing the right device family. David Johnson, Cypress Semiconductor; *Electronic Design*, 5/27/97, p. 97, 5 pp.

SYSTEM DESIGN

Raise your sights to the system level. Whether you're building control-dominated systems based on microprocessors and microcontrollers, or ASICs and ICs based on DSPs, the hardware/software challenges you're up against will require a system-design methodology. Barbara Tuck, *Computer Design*, 6/97, p. 53, 11 pp.