

Literature Watch

ASICs

Deep-submicron geometries dictate new approaches. The ever shrinking geometries of deep-submicron ASICs can cause interconnect delays, nonlinearities, and physics to dominate a design. John Gallant, *EDN*, 6/8/95, p. 65, 6 pp.

Development Tools

Submicron EDA tools help tackle tough designs. As chips become more complex, design methods should integrate system partitioning, physical layout, power considerations, and signal integrity. Jim Lipman, *EDN*, 6/8/95, p. 45, 8 pp.

Delay effects rule in deep-submicron ICs. Successful design demands that verification tools accurately model the previously negligible delay effects now assuming first-order status. Clive Maxfield, Intergraph; *Electronic Design*, 6/12/95, p. 109, 8 pp.

Will Windows NT finally challenge Unix design tools? After a slow start, EDA software on Microsoft's operating system appears to be gaining momentum. Robert Ristelhueber, *Electronic Business Buyer*, 6/95, p. 39, 5 pp.

Delay calculator yields deep-submicron accuracy. Integrated Silicon Systems (ISS) provides environment-independent driver models with its Ψ Time delay calculation. Lisa Maliniak, *Electronic Design*, 6/12/95, p. 199, 3 pp.

Graphics/Video

PC chip sets integrate graphics controller. Weitek's W464 chip set eliminates the frame buffer to reduce cost. Richard Nass, *Electronic Design*, 6/12/95, p. 193, 2 pp.

Chip speeds high-resolution graphics, video playback. Trident's T3D2000 handles 64-bit VGA and supports up to 16M of RAM. Richard Nass, *Electronic Design*, 6/12/95, p. 196, 2 pp.

Memory

Low power and speed mix well in SRAM arena. Powerful new applications, portable systems, and energy conservation cause traditional market definitions to blur. Carol Rosen, *Electronic Business Buyer*, 6/95, p. 59, 3 pp.

Motherboard ICs establish new integration baseline. Cypress' Hyper-Cache chip set absorbs the second-level cache and other control functions. Dave Bursky, *Electronic Design*, 6/12/95, p. 83, 4 pp.

Designing and debugging with flash ROMs. Since it looks like flash isn't going to go the way of bubble memory, here are some tips on how to use it. Arvind Rana, Grammar Engine; *Embedded Systems Programming*, 6/95, p. 78, 7 pp.

Peripherals

ICs and reference designs speed PC Card development. Several vendors offer special ICs for PCMCIA cards. Gary Legg, *EDN*, 6/8/95, p. 79, 6 pp.

Modem chip set buyers' guide. The modem market has grown in leaps and bounds, thanks to the increased speeds and expanded feature sets of today's chip sets. Guy Wright, *Communication Systems Design*, Issue 1, p. 51, 7 pp.

Processors

μ -EP-1: a simple architecture. This article describes a simple but powerful 32-bit architecture for experimental and educational purposes in computer architecture design. B. Ulmann, University of Mainz (Germany); *Computer Architecture News*, 6/95, p. 19, 4 pp.

Zero in on x86 derivatives for your embedded PC. Embedded systems may use processors ranging from 386-class to 586-class devices from a number of vendors. Markus Levy, *EDN*, 6/22/95, p. 37, 6 pp.

Programmable Logic

FPGAs take on specialized DSP functions. Many simple DSP functions can operate faster in FPGA silicon. Bob Klein, AT&T Bell Labs; *Electronic Design*, 6/12/95, p. 144, 6 pp.

Options dot the programmable-logic landscape. PLDs have evolved from fast prototyping tools into production devices that speed time to market for lower-volume products. Richard Kapusta, Cypress Semiconductor; *EDN*, 7/6/95, p. 107, 6 pp.

Prototyping beats simulation for complex, real-time designs. To prototype or simulate? Advances in programmable logic and increasing system complexity make prototyping worth scrutinizing. Leo Petropoulos, Altera; *EDN*, 6/8/95, p. 136, 2 pp.

System Design

Careful system analysis yields optimum IC-based PCMCIA power control. Designing power-management circuitry into a PC Card requires an economic trade-off between power-switch on-resistance and power-supply accuracy. Bob Wolbert, Micrel Semiconductor; *EDN*, 6/22/95, p. 121, 5 pp.

Delivering the high-speed clock. As CPU clock speeds exceed 100 MHz, designers must spend more attention on minimizing clock skew. Bill Schweber, *EDN*, 7/6/95, p. 32, 9 pp.

Wireless design: options for the 90's. A roadmap to wireless communications, addressing security, throughput, connectivity, and standards. Hank Walland, Atlantic Quality Design, Bud Simciak; *Communications Systems Design*, Issue 1, p. 19, 7 pp.

Design considerations for the embedded PC. Want to develop an embedded PC? This article takes a look at the development tools and hardware and software design considerations involved. Eric Auzas, Intel; *Embedded Systems Programming*, 7/95, p. 62, 9 pp.