

## LITERATURE WATCH

**AUDIO/VIDEO**

*Playing the 3D game.* The Christmas '95 selling season was a bust as far as 3D add-in cards for PC games went, and given that the value proposition for these boards hasn't changed much, things may not be too different for Christmas '96. Jon Peddie, PC Graphics Report; *OEM Magazine*, 11/96, p. 72, 6 pp.

**BUSES**

*ATM courts VME.* There's a marriage of convergence in the works between an old bus and a young switching technology, and both have much to gain from the relationship. David Lieberman and Loring Wirbel, *OEM Magazine*, 11/96, p. 18, 3 pp.

*AGP offers inexpensive 3D graphics.* New technology makes it possible for home-use PCs to achieve high resolution three-dimensional graphics and display MPEG-2 video. Hiroki Eda, *Nikkei Electronics Asia*, 11/96, p. 50, 6 pp.

**MEMORY**

*Processor and memory designs: where are they heading?* Are processor and memory designs actually competing to limit the computer-performance growth curve? Nagi Mekhiel, Ryerson Polytechnic University; *Electronic Design*, 11/18/96, p. 111, 2 pp.

**MISCELLANEOUS**

*Scan-based testing hits the mainstream.* The advent of larger devices that are harder to test makes scan-based design-for-test techniques a priority. John Novellino, *Electronic Design*, 11/18/96, p. 58, 5 pp.

*IP tames today's DSP design challenges.* Using interchangeable building blocks of intellectual property (IP) maximizes design reuse. Two examples (ICs and cellular phones) showed how today's designer faces ever-increasing levels of integration, design reuse, and time-to-market pressure. Steve Svoboda, Cadence; *Electronic Design*, 11/18/96, p. 99, 6 pp.

*Java applets gather remote data over the Web.* Although most of the data transferred over the Web consists of static text and graphics, you're not limited to just sending documents. You can connect nearly any type of device to the Internet, and if that device supports hypertext protocol (HTTP), you can program it to send nearly any type of data. Steve Houtchens, Integrated Systems; *Personal Engineering*, 11/96, p. 25, 4 pp.

*Sony puts 20 CSPs in digital camcorder.* Sony has incorporated 20 chip-scale packages (CSP's) into its new home-use digital camcorder, enabling very high packing density. Kaori Fujita, *Nikkei Electronics Asia*, 11/96, p. 40, 1 pg.

**PERIPHERALS**

*Preprocess audio with notch filter to improve FFT dynamic range.* Within the analyzer, a sharp notch filter is tuned to the frequency of the stimulus sine wave to effectively null out the fundamental frequency. Tom Mintner, Audio Precision; *Electronic Design*, 11/18/96, p. 70, 2 pp.

**PROCESSORS**

*Microprocessor developments advance on several fronts.*

This year's Microprocessor Forum showed a landscape changed in some ways from last year, although many trends continued. Rodney Myrvaagnes, *Electronic Products*, 12/96, p. 21, 2 pp.

*A minus B=A+NOT(B) + 1, (part 1).* Upon examining an ALU, it is surprising to find a 1's complementor glaring balefully at you, instead of the 2's complementor you expected to be there. Clive "Max" Maxfield, Intergraph; *EDN*, 12/5/96, p. 199, 4 pp.

*Intel P55C executes two MMX instructions in parallel.* Intel unveiled an outline of its new P55C microprocessor, which will be able to handle multimedia instructions called MMX. Naoki Asami, *Nikkei Electronics Asia*, 11/96, p. 38, 1 pg.

*PC clock frequency loses benchmark status.* The performance of a 166-MHz x86-compatible chip is better than Pentium. Performance is boosted by a higher external bus frequency and by switching from fast-page-mode DRAM to EDO memory. Shin-ichi Jinbo and Takashi Ohwada, *Nikkei Electronics Asia*, 11/96, p. 64, 4 pp.

**PROGRAMMABLE LOGIC**

*Field-programming analog IC allows easy design of complex analog signal processors.* Designing analog circuits is becoming a lost art; the number of engineers around the world who can design large-scale integrated analog circuits can be counted in the hundreds rather than the thousands. Peter Fletcher, *Electronic Design*, 11/18/96, p. 35, 2 pp.

*FPGAs go on the record.* The first commercial application of reconfigurable coprocessors for the common man targets the audiophile, but future developers will spin new tunes. Murray Disman, Programmable Logic News & Views; *OEM Magazine*, 11/96, p. 85, 3 pp.

**SYSTEM DESIGN**

*The new art of PC design.* For many engineers, design, like mathematics, exists in a pure land ruled by logic. But in the wild borderlands at the converging frontier of computing and entertainment, the consumer is the only law. Ron Wilson, *EE Times*; *OEM Magazine*, 11/96, p. 48, 3 pp.

*LCD-bias supplies: here's some tips for turning out successful designs.* Don't despair; you can design LCD-bias circuits that do their job while avoiding problems with EMI compliance and supply sequencing. John Wettroth, Maxim; *Electronic Design*, 11/18/96, p. 57, 6 pp.