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HEADLINE: VESA Announces Release of Unified Memory Architecture Standard; Leading Graphic & Core Logic Vendors Immediately Implement New Technology

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BODY:

March 8, 1996--VESA, the Video Electronics Standards Association, announced today at a press conference to launch the VESA Unified Memory Architecture (VUMA) standard, the immediate adoption and implementation of the technology by leading graphic and core logic vendors.

Committee Chair, Rajesh Shakkarwar was joined by 3D Labs, Award, Cirrus, Cypress, Elitegroup, Hitachi, S3, Trident, OPTi, SiS, UMC, and VIA in presentations on the technology and demonstrations of products incorporating this new technology. The VUMA architecture enables more efficient use of system memory and will allow economical integration of high-performance, multimedia applications such as 3D graphics and MPEG playback in PCs.

"VUMA is the next logical step in the evolution of PC architecture," said Rajesh Shakkarwar of OPTi and chairman of VESA's UMA committee. "The fact that major players are already implementing this new standard proves the key role VESA can play in enabling industry leaders to unify in their efforts to allow important hardware and software components to work together in a system. In the end, we're providing end-users with more economical, efficient and interoperable products."

VUMA Design and Implementations

The new VUMA standard for personal computers offers flexibility, performance, efficiency, reduced cost and various price/performance options for system designers. VUMA was designed to share physical system memory (DRAM) between the system and an external VUMA device. A VUMA device could be any type of controller that needs to share physical system memory (DRAM) with a CPU, as well as directly access the DRAM.

Peripherals can utilize VUMA in a variety of ways. The first implementation of a VUMA device is a graphics controller. With the VUMA system in place, a graphics controller will use a part of the physical system memory as its frame buffer, thus sharing it with the system and directly accessing it. This could eliminate the need for separate graphics memory or frame buffer, resulting in cost savings.

The next implementation of a VUMA device will be with a 3D graphics controller. Using a VUMA system, the 3D graphics controller will incorporate off-screen buffers and texture, and/or a frame buffer in the physical system memory. This will result in efficient utilization of resources.

More Flexibility for the PC

VUMA enables a more flexible PC which will allow computer users to change the distribution of the total physical system memory in to graphics and OS memory through a slider bar, without opening the PC or resetting the machine. This will allow the system to run memory-intensive applications with a smaller frame buffer and larger system memory; or a graphics-intensive application with a larger frame buffer and smaller system memory, giving end-users the best of both worlds.

In a VUMA system, if the user selects a graphics mode not requiring all of the allocated frame buffer, the unused frame buffer could be returned to OS for its use. Conventional IBM-compatible PCs have a frame buffer separate from the main memory to handle the high bandwidth requirements of graphics controllers from the frame buffer for screen refresh. With the older technology, the main memory could not support both the CPU and graphics controller data bandwidths, so a separate frame buffer was the only practical solution.

In the past, the VUMA approach would have significantly reduced system performance. However, today's improvements in all the supporting technologies, such as high-performance DRAMs -- EDO, BEDO and Sync DRAM; wide data paths; buffered memory access to I/O buses; improvements in L1 and L2 cache sizes and cache architectures; CPU and Core logic data bursting and buffering; have converged in such a way that VUMA becomes a very attractive and practical solution. In one implementation where a separate frame buffer is not required, VUMA results in cost savings over the traditional architecture. In other implementations it results in higher performance.

Builders of the VUMA

Several leading graphics, systems and core logic companies worked on the development of the VUMA standard, and the standard is endorsed by the following companies: 3Dlabs, Acer, Advanced Micro Devices, AMI, ARK Logic Inc., ATI Technologies, Award Software, Axis, Cirrus Logic, Cypress Semiconductor, Cyrix, Elitegroup Computer Systems, Expressway, Hitachi America, Hualon Microelectronics, Integrated Technology, Macronix, Metro Link, Microelectronics International, Mobicom Technologies, Molex, Oak Technology, OPTi, Phoenix Technologies, RIDS Systems Ltd., S3 Inc., SiS Corporation, Samsung Information Systems, Samsung Semiconductor, SGS-Thomson Microelectronics, TEC Corporation, Tiva Microcomputer Corp., TMC, Trident Microsystems, Tulip Computers, UMC, VIA Technologies, Weitek Corporation and Winbond Systems Lab.

VESA is the international organization that sets and supports industry-wide video, audio, graphics and electronic standards designed to support the PC, workstations and other computing environments. VESA is committed to developing open, interoperable and international standards globally for these markets, thus ensuring worldwide market growth. VESA is a non-profit corporation established in 1989 and is headed by a Board of Directors representing a membership of more than 260 corporations worldwide. For more information or to arrange an interview, please contact the VESA office at 408/435-0333.

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