PISMO Advisory Council Launched to Define External Memory Interface Standard

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A group of leading semiconductor companies today announced the launch of the PISMO™ Advisory Council, the industry's first organization focused on streamlining system-level memory validation and test. The group will define a single, board-level interface standard that allows designers to use a variety of memory devices on development platforms from multiple vendors in a plug-and-play fashion. The new PISMO (Platform Independent Storage Module) standard is expected to enable the more rapid deployment of increasingly powerful and affordable mobile telecommunications, computing and consumer products.

"We are committed to working together as an industry to reduce the complex test and validation issues that have arisen as the result of the endless combinations of memory and logic chip sets," said Fasil Bekele, chairman of the PISMO Advisory Council. "The new PISMO interface gives semiconductor providers an opportunity to differentiate their product lines, while simplifying and reducing the cost of design for their customers."

Significant growth in the wireless and embedded markets has given rise to hundreds of new processors, chip sets and memory types that must be tested for compatibility. Without a standard interface, system designers must develop and use a variety of device-specific development boards to ensure compatibility. The PISMO interface standard will define mechanical and electrical specifications for small form-factor memory modules. The PISMO modules will be stackable and supported by tools

that provide easy access to signals for performing in-depth analysis. These features and more make PISMO memory modules ideal for validating and prototyping combinations of memory devices with a variety of host controllers.

PISMO ADVISORY COUNCIL LAUNCHED/2-2-2-2

The PISMO Advisory Council is spearheaded by Spansion LLC, one of the world's leading suppliers of NOR Flash memory, and ARM®, the industry's leading supplier of 16- and 32 bit embedded RISC microprocessors.

"Memory suppliers have a responsibility to help solve the tough development challenges that have arisen due to increased differentiation in the memory and logic markets," said Stephen Lapinski, vice president of systems engineering and strategic alliances for Spansion. "That's why we are spearheading this effort to lead the industry in putting PISMO compliant memory modules into the hands of customers. We are very encouraged by this strong showing of support from industry leaders, and are confident that the council's efforts will not only streamline development, but lead to more feature-rich systems at affordable price points."

"The growing momentum and support for PISMO indicates a desperate need to streamline development for system designers," said Mark Snook, product manager for RealView® Hardware Platforms at ARM. "We are committed to supporting PISMO on our development platforms, and believe that the standard will not only speed system deployment, but will also lead to more rapid innovation in the mobile and embedded markets."

Established and Emerging Semiconductor Companies Support PISMO

A variety of semiconductor companies have joined Spansion and ARM as charter members. They include NanoAmp Solutions, a provider of

low-voltage and ultra low-power memory solutions for the wireless communication, industrial control, automotive and medical markets; SMedia, a supplier of innovative and high-performance 3D graphics and multimedia ICs for handhelds; Spreadtrum, a provider of wireless Integrated Circuits (IC) and software solutions to wireless equipment manufacturers; and Toshiba Corp. (Toshiba), a global semiconductor company and one of the world's leading suppliers of memory products.

"While we pride ourselves on our comprehensive offering of low-power memory products, the breadth of our product line can sometimes present a design challenge for our customers," said Mike Vincent, vice president of marketing for NanoAmp. "Customers should be able to pick and choose the right memory solution, without having to develop a new interface for each possible combination of memory and logic. This new standard will allow them to do just that."

PISMO ADVISORY COUNCIL LAUNCHED/3-3-3-3

"This new standard allows companies to manage the cost of validating memory and logic by eliminating the need for proprietary memory interfaces and dedicated development boards," said Peter Chiang, deputy director of strategy marketing and sales, SMedia Technology Corporation. "With PISMO, memory and logic suppliers alike can provide a valuable service to customers, allowing them to quickly and easily choose the right memory product for their design."

"Support for the PISMO standard will give customers added flexibility, and the freedom to choose the best combination of memory and logic," said Mr. Shozu Saito, vice president, memory division Toshiba Corporation Semiconductor Company. "We will support the PISMO Advisory Council to further the adoption of this very important standard."

As members, each company will provide input and be allowed to vote on

enhancements and changes to the standard. They will also be given early access to PISMO specifications and design collateral. Membership is open to any company involved in semiconductor or systems development. Meetings will be held quarterly, with the next meeting planned for February 22, 2005.

Significant Progress Already Made

The council has already released the first version of the specification, defining a standard interface for devices on the Static RAM (SRAM) bus. It has also begun work on an enhanced version that will extend its support for devices on other memory buses such as synchronous DRAM (SDRAM); DDR Flash and RAM; NAND and SPI.

A variety of products based on PISMO are already shipping. ARM is offering PISMO based development platforms. Additionally, Spansion offers a comprehensive family of PISMO modules, as well as a unique logic analyzer module that enables users to perform in-depth system analysis. The module provides easy access to signals to measure performance, throughput and power consumption. Higher density memory types can be easily tested by simply stacking modules one on top of the other.

For more information on PISMO products and membership, please visit the PISMO Advisory Council web site at www.pismoworld.org .

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