Semico Research Releases Report and Announces Event Partnership at ConfigCon(TM) Taiwan; Configurability Extends 32-bit CPU Core Influence According to Report
http://www.tmcnet.com/usubmit/-semico-research-releases-report-announces-event-partnership-configcontm-/2006/01/31/1330234.htm

PHOENIX --(Business Wire)-- Jan. 31, 2006 -- ConfigCon Set to Address New Opportunities Emerging in Communications and Consumer Electronics

According to the latest study released by Semico, the use of Configurable 32-bit CPU cores is going to be the next major driver in several of the sub-families in the ASIC market, such as the System-on-a-Chip (SoC), the Structured ASIC, the Application Specific Standard Product (ASSPs) and Field Programmable Gate Arrays (FPGAs).

Semico believes silicon that includes 32-bit CPU cores in general will increase to 3,117.7M units by 2009, with a CAGR of 12.8%. However, of this total, silicon that uses configurable 32-bit CPU cores will reach 605.8M units by 2009, a CAGR of 45.9%.

Semico believes the 32-bit CPU core market will segment between the different types of semiconductor devices that can use CPU cores. Semico forecasts that ASSPs will be the product family to lead in revenues with over $11.6B by 2009, a 17.5% CAGR. Performance SoCs follow closely behind ASSPs in revenues shipped.

The reason for this dramatic increase in configurable CPU core usage is the added flexibility a configurable CPU core brings to the designer in crafting his final silicon solution. Now, the instruction set of the CPU core can be tailored to fit the end application much more closely. In effect, designers can now remove unnecessary gates by combining instructions to remove software bottlenecks. This can have wide implications on end system performance, power consumption, speed and die area.

An additional benefit from the use of configurable CPU cores is starting to become more prominent in the thinking of system architects and designers, namely security.

"One of the realities of the high tech market is reverse engineering," said Tony Massimini, Chief of Technology at Semico Research Corp. "Companies need to protect their life blood, namely their intellectual property." Chips can be de-capped and the circuit design examined. Software can be analyzed and copied. The instruction set extensions of configurable cores are more of a hybrid. The circuit design includes additional transistors generated from EDA tools. These circuits are the result of customized code. It would be very difficult for someone to determine the circuit design and the associated code. Configurable cores add a level of security to protect IP, making it substantially more difficult to de-construct an algorithm.

A further finding of the study shows that the number of CPU cores being utilized in ASICs today is rising as designers seek to deliver the processing power necessary by new emerging applications. "The tradeoff between using multiple CPU cores and performance requirements is a favorable one," remarked Rich Wawrzyniak, Sr. Analyst at Semico Research Corp. "In reality it costs relatively little to embed additional CPU cores in terms of die area and overall system cost. This reinforces the trend towards configurability since designers are now not only able to use multiple CPU cores in a design, they can tailor the instruction set of each one to directly fit the needs of the application," said Mr. Wawrzyniak.

In its most recent report, "Configurability Extends 32-bit CPU Core Influence: Defining Markets," Semico Research examines the end use markets for embedded cores and those applications that are

most likely to implement configurability. Many new opportunities are emerging in communications and consumer electronics. These have new standards for which algorithms are still being developed. It is in such applications where designers can add their own "special sauce" with configurability to achieve differentiation.

"At the dawn of the 21st century, it's clear that the global semiconductor market is undergoing a paradigm shift in design methodology," said Carl Schlachte, president and CEO at ARC International. "OEMs and semiconductor companies are rapidly moving away from using one-size-fits-all IP toward a solution that better enables their success, not that of their third party suppliers. Semico's report underscores this trend, which ARC sees unfolding on a daily basis."

This study is available for immediate delivery for $5,000. To purchase, please contact Mike Caldwell at 602-997-0337 or MikeC@semico.com, and reference ML101-06, Configurability Extends 32-bit CPU Core Influence: Defining Markets.

Semico Research together with partners ARC International (LSE:ARK) and DigiTimes, today announced ConfigCon Taiwan, the first in a series of ConfigCon(TM) conferences that will be held throughout 2006. ConfigCon Taiwan will take place at the Ambassador Hotel in Hsinchu on February 23rd. The event's theme is "How Configurable SoC Technology is Enabling the Multimedia Market." It will include more than 20 presentations from companies across the configurable SoC development chain that supply processor cores; related on-chip IP; compilers/debuggers and other software development tools; HDL simulation, synthesis and EDA tools; middleware and operating systems; and silicon manufacturing services.

About Semico
Semico Research Corp is a marketing and consulting research company located in Phoenix, Arizona. Semico was founded in 1994 by a group of semiconductor industry experts. We have improved the validity of semiconductor product forecasts via technology roadmaps in end-use markets.

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