Synopsys HSIM-XA Adopted by STMicroelectronics for Its Advanced Smart Power Technology

XA Delivers Productivity Gains in Analog/Mixed-Signal Verification

MOUNTAIN VIEW, Calif., May 13 /PRNewswire-FirstCall/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in software and IP for semiconductor design and manufacturing, today announced the successful outcome of an extensive collaboration with Synopsys HSIM-XA and STMicroelectronics, a global leader in developing and delivering semiconductor solutions across a broad spectrum of microelectronics applications. The result of this joint effort enables ST to significantly accelerate their high-accuracy, transistor level verification of complex analog ICs using ST's Smart Power technology for highly integrated automotive applications.

"Our Smart Power ICs cover a broad spectrum of different applications that continue to grow in complexity. Coupled with wide operating ranges for both voltage and temperature, these designs have posed great challenges for us in the AMS verification domain," said Lyes Djama, AMS Design Platform manager of STMicroelectronics' Smart Power & High Voltage Competence Center. "Using XA technology allows us to significantly improve the AMS verification of these leading-edge designs and meet the challenges we are currently facing."

Synopsys' XA acceleration technology allows customers to achieve HSPICE® accuracy while delivering orders-of-magnitude-higher performance and capacity than existing FastSPICE solutions. XA's superior performance derives from a combination of advanced technologies, including compiled code simulation algorithms for faster transient analysis, topology and behavior-driven recognition algorithms to optimize simulation capacity, and an adaptive multi- rate evaluation engine. When combined with either NanoSim® or HSIM™, XA acceleration technology delivers a complete transistor-level verification solution with higher accuracy and higher throughput.

"Our collaboration with ST on the new XA technology is another example of a mutually beneficial alliance between Synopsys and our customers," said Paul Lo, vice president and general manager of the Analog/Mixed-signal Group at Synopsys, "Combining Synopsys' expertise in circuit simulation and STMicroelectronics' deep knowledge in analog design, we are able to deliver technology that uniquely addresses the requirements of AMS designers. Simply stated, XA technology enables 'out-of-the-box' SPICE accuracy with FastSPICE capacity and performance."

ST's proprietary smart power technology allows analog, digital and power circuits to be integrated on a single chip, producing a complete system - including the MCU - on a single piece of silicon. This exceptional level of integration facilitates more compact packaging and delivers significant benefits to manufacturers of automotive systems through lower costs and increased reliability.

About Synopsys

Synopsys, Inc. (NASDAQ: SNPS) is a world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading system and semiconductor design and verification platforms, IC manufacturing and yield optimization solutions, semiconductor intellectual property and design services to the global electronics market. These solutions enable the development and production of complex integrated circuits and electronic systems. Through its comprehensive solutions, Synopsys addresses the key challenges designers and manufacturers face today, including power management, accelerated time to yield and system-to-silicon verification. Synopsys is headquartered in Mountain View, California, and has more than 60 offices located throughout North America, Europe, Japan and Asia. Visit Synopsys online at https://www.synopsys.com/.

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