Latest Innovations in Synopsys IC Compiler Deliver up to 40 Percent Power Reduction at HiSilicon

IC Compiler Widely Deployed In HiSilicon Production Design Flow

MOUNTAIN VIEW, Calif., April 26, 2011 /PRNewswire/ -- Synopsys, Inc. (Nasdaq: SNPS), a world leader in software and IP for semiconductor design, verification and manufacturing, today announced that HiSilicon, a leading fabless semiconductor house supplying end-to-end ASIC solutions for communications networking and digital media markets, has reduced stand-by power consumption by up to 40 percent using the latest technology in Synopsys' IC Compiler, a key component of Synopsys' Galaxy™ Implementation Platform. Driven by their success, HiSilicon has deployed IC Compiler in their production design flow for ICs targeting green networking applications. HiSilicon is a leading enabler of green networks, driving toward building highly integrated and differentiated ASICs delivering more than 50 percent standby power savings.

"Device performance is our top priority, but in the green networking space, leading-edge performance with the lowest power is a key differentiator," said Yan-Qiu Diao, senior director, research and development, at HiSilicon Technologies Co., Ltd. "IC Compiler's new final-stage leakage recovery capability delivered 40 to 50 percent standby power savings while preserving timing on blocks in our recently taped out designs. We have since deployed final-stage leakage recovery in our production tape-out flow."

Traditional methods for reducing leakage, the power consumed by ICs in idle or stand-by mode, have relied largely on multi-threshold libraries. New channel-length-biased cell libraries can effectively provide many variants of a given cell with the same functionality but different leakage power consumption. IC Compiler's latest release provides a powerful final-stage leakage recovery capability architected to manage a multitude of these leakage variants in order to substantially reduce stand-by power consumption while preserving timing. HiSilicon initially exercised this capability on a few trial blocks. Encouraged by more than 40 percent standby power savings coupled with very low impact on timing, they immediately applied this capability on several blocks of a live tape out and succeeded in substantially lowering their power consumption. This new capability is the latest addition to IC Compiler's comprehensive solution for advanced low-power designs.

"Delivering capabilities that enable designers to stay at the forefront of the power-performance technology curve is a critical driver shaping every release of IC Compiler," said Antun Domic, senior vice president and general manager, Implementation Group at Synopsys. "As a key enabler of energy efficient equipment used in green networks, HiSilicon was pleased to recognize the improvements delivered by IC Compiler's final-stage leakage recovery."

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) is a world leader in electronic design automation (EDA), supplying the global electronics market with the software, intellectual property (IP) and services used in semiconductor design, verification and manufacturing. Synopsys' comprehensive, integrated portfolio of implementation, verification, IP, manufacturing and field-programmable gate array (FPGA) solutions helps address the key challenges designers and manufacturers face today, such as power and yield management, system-to-silicon verification and time-to-results. These technology-leading solutions help give Synopsys customers a competitive edge in bringing the best products to market quickly while reducing costs and schedule risk. Synopsys is headquartered in Mountain View, California, and has approximately 70 offices located throughout North America, Europe, Japan, Asia and India. Visit Synopsys online at http://www.synopsys.com/.

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