Synopsys IC Compiler Enables STMicroelectronics to Speed the Tapeout of Ultra-Low-Power Nomadik Multimedia Processor

Synopsys Galaxy Design Platform Delivers Complete Flow for Ultra-Low-Power Design

PRNewswire-FirstCall
MOUNTAIN VIEW, Calif.

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced that STMicroelectronics (NYSE: STM), a leading supplier of semiconductors, used IC Compiler, Synopsys' next-generation place-and-route system to successfully tape out the ultra-low-power version of ST's Nomadik Multimedia Processor. The biggest challenge faced by the ST team on this design was to significantly reduce the power consumption while maintaining leadership in audio and video performance. The Galaxy™ Design Platform's comprehensive low-power support was a critical success factor in achieving these goals. ST was also able to achieve significant productivity gains by being able to close the most difficult timing three times faster using IC Compiler. STMicroelectronics' Central CAD and Design Solutions team has confirmed its decision to support IC Compiler in ST's 90-nm and 65-nm design kits in 2006.

"Synopsys' IC Compiler and Galaxy Design Platform have provided us with outstanding flow automation and quality of results to address all the challenges associated with ultra-low-power design," said Alain Artieri, Director in ST's Application Processor Division. "Following its successful performance in this tapeout, we are now deploying IC Compiler on advanced 65-nanometer multimedia designs."

The Nomadik family of multimedia processors is one of the world's most advanced platforms for mobile applications that offers makers of handheld multimedia devices a combination of ultra-low-power, unsurpassed audio and video quality, and scalability for different performance levels. The Galaxy Design Platform was used for synthesis, physical implementation, test, sign-off, and chip finishing. Galaxy's comprehensive low-power methodology minimized the dynamic power by implementing multiple voltage domains that can be switched on or off as required. Galaxy also reduced the leakage power by automatically selecting an optimized mix of multi-threshold cells.

"We have had a longstanding partnership with STMicroelectronics, which has been tremendously beneficial to both companies," said Antun Domic, senior vice president and general manager, Synopsys Implementation Group. "We have gained valuable insight into the latest design challenges, enabling us to develop advanced products such as IC Compiler. In turn, ST has been able to deploy these solutions for productivity gain on leading-edge ICs like Nomadik. We look forward to extending our collaboration with the Nomadik team in upcoming new designs, as well as supporting ST Central CAD and Design Solutions in the broad deployment of IC Compiler."

About IC Compiler

IC Compiler is Synopsys' next-generation place-and-route system. It provides superior results and faster time-to-results by extending physical synthesis to full place-and-route, and by enabling signoff-driven design closure. Current-generation solutions have a limited horizon because placement, clock tree, and routing are separate, disjointed operations. IC Compiler's Extended Physical Synthesis (XPS) technology breaks down the walls between these steps by extending physical synthesis to full place-and-route. IC Compiler has a unified, TCL-based architecture that implements innovations and harnesses some of the best Synopsys core technologies. It is a complete place-and-route system with everything necessary to do next-generation designs, including physical synthesis, placement, routing, timing, signal integrity (SI) optimization, power reduction, design-for-test (DFT), and yield optimization.

About Synopsys

Synopsys, Inc. is a world leader in electronic design automation (EDA) software for semiconductor design. The company delivers technology-leading semiconductor design and verification platforms and IC manufacturing software products to the global electronics market, enabling the development and production of complex systems-on-chips (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time-to-market for its customers. 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 www.synopsys.com.

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