Synopsys Proteus OPC Delivers Superior Cost of Ownership on Intel® Core™ Microarchitecture

Optimized x86-64 Hardware Offers Superior Price/Performance for OPC Compared to Custom Hardware Platforms

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced that its industry-leading Synopsys Proteus optical proximity correction (OPC) software has achieved substantial processor and memory improvements when optimized for and deployed on Intel® Core™ microarchitecture-based server products. Compared to competitive tools running on special-purpose custom platforms, Proteus has demonstrated price/performance superiority on Intel architectures, such as the Intel Dual-Core Xeon® Processor 5100 series (formerly called Woodcrest), enabling chipmakers to significantly lower their turnaround time (TAT) and overall cost of ownership (CoO). This translates into a significant CoO advantage for Proteus OPC users.

Unlike alternative approaches involving custom hardware solutions, optimized general-purpose platforms offer a high degree of flexibility -- an essential consideration, as the overall cost of computing is becoming an increasingly vital concern for chipmakers. Users can deploy the same solution throughout their design-to-silicon flow, whether in back-end steps such as OPC, lithography rule checking (LRC) and mask data preparation (MDP), or in design-rule checking (DRC) and other front-end design applications.

Noted Anantha Sethuraman, vice president of marketing, Design for Manufacturing, at Synopsys, "Our proven Proteus OPC engine has been in production for 10 years over seven consecutive technology nodes, delivering an average software performance improvement of 40 percent from year to year. Its innovative dual-domain engine further advances our commitment to lower customers' CoO by enabling a 50-percent reduction in Proteus' memory footprint per compute node. When combined with optimized general-purpose computers -- which are on their own steep price/performance improvement path -- we believe this solution constitutes the most cost-effective strategy for high-volume manufacturing of 45-nm and smaller devices."

"Optimized tools, such as Synopsys Proteus, can take advantage of the significant performance, power efficiency and value advantages offered by the Intel Xeon 5100 series processors," said Martin J. Menard, director, Platform Capabilities, Intel IT. "Intel Core microarchitecture-based server platforms offer a cost-effective high performance computing solution in today's demanding chip manufacturing environment."

Synopsys will offer live demonstrations of Proteus' scalability during the SPIE Advanced Lithography Conference, February 27-28, at the San Jose Convention Center. The company's booth #813 will feature a rack containing 42 3.0-gigahertz (GHz) Intel Xeon 5160 processors. Editors interested in learning more about Synopsys' enhanced Proteus OPC solution and its performance advantages when run on general-purpose architectures are invited to visit Synopsys' booth at the show, or contact Lisa Gillette-Martin of MCA, (650) 968-8900, ext. 115, or lgmartin@mcapr.com to arrange an appointment.

About Synopsys DFM

With its design for manufacturing (DFM) tools, Synopsys is expanding on what is already the industry's most comprehensive DFM solution that spans from RTL to silicon. Synopsys' DFM product family addresses critical manufacturability and yield issues with the following products: IC Compiler physical design solution, PrimeYield LCC, PrimeYield CMP and PrimeYield CAA, Hercules™ PVS, Proteus OPC, CATS® mask data preparation product, SiVL® lithography verification tool, patented PSM technology, and physics-based TCAD suite of simulation products. Synopsys' Manufacturing Yield Management (MYM) solutions extend directly into the fab, providing customers real time access to yield data and the analysis capability needed to reduce random, systematic and parametric defects.

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-chip (SoCs). Synopsys also provides intellectual property and design services to simplify the design process and accelerate time-to-market for its customers. Synopsys has its headquarters in Mountain View, Calif., and has offices in more than 60 locations throughout North America, Europe, and Asia. Visit Synopsys online at https://www.synopsys.com/ .

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Editorial Contacts:
Sheryl Gulizia

Synopsys, Inc.
650-584-8635
sgulizia@synopsys.com

Lisa Gillette-Martin
MCA, Inc.
650-968-8900 x115
lgmartin@mcapr.com

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CONTACT: Sheryl Gulizia of Synopsys, Inc., +1-650-584-8635, or sgulizia@synopsys.com; or Lisa Gillette-Martin of MCA, Inc., +1-650-968-8900, ext. 115, or lgmartin@mcapr.com, for Synopsys, Inc.

Web site: https://www.synopsys.com/