

Synopsys Delivers New Release of Sentaurus TCAD Tool Suite on Dual-Core Intel® Xeon® Processors

Sentaurus TCAD Accelerates Advanced Technology Development With New Process and Device Modeling Capabilities

PRNewswire-FirstCall
MOUNTAIN VIEW, Calif.

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced the availability of a new Sentaurus TCAD release that adds significant process and device modeling capabilities for accelerated development of advanced technologies, as well as full support for 64-bit Dual-Core Intel Xeon processors. With continued device migration to smaller process geometries and new technology nodes, TCAD tools are essential for developing and optimizing semiconductor processes and devices, thereby significantly reducing technology development time and cost.

"Our customers use Synopsys' TCAD tools to solve technology challenges on a daily basis and achieve predictable success," said Wolfgang Fichtner, general manager of the Synopsys TCAD Business Unit. "The growing use of Sentaurus in semiconductor technology development and manufacturing requires ever-increasing computing power. The Intel Xeon processors allow our customers to take full advantage of TCAD simulations to more rapidly explore and optimize their technologies, leading to time and cost savings, as well as higher-yielding products."

The Sentaurus Y-2006.06 release offers new modeling capabilities that enable customers to continue pushing the technology envelope for current and future generations of semiconductor technology. These capabilities include simulating ultra-shallow junctions used in leading-edge CMOS devices, modeling strained silicon for enhancing device performance, optimizing optical and electrical characteristics for optoelectronics and studying novel structures on the atomistic level with kinetic process Monte Carlo and device Monte Carlo simulations.

"Many of our customers are faced with an increasing need for design computing performance and capacity to perform complex design and modeling work," said Martin Menard, general manager and director of Intel IT Platform Capability at Intel Corporation. "We are excited to see the release of Synopsys' leading TCAD tools such as Sentaurus on Intel's Xeon processor 5000 sequence-based platforms (code named Bensley) to deliver high performance for large-scale TCAD simulations at a low cost."

Increased computing power makes it less expensive for semiconductor manufacturers to perform large-scale TCAD simulations as diverse as deep-submicron 3D effects, CMOS image sensors, nonvolatile memories, radiation single-event effects and ESD protection devices, thereby helping reduce experimental costs significantly. The 64-bit Dual-Core Intel Xeon processors offer the performance and throughput required to run large-scale TCAD simulations efficiently. Customers involved in the technical development in manufacturing can also take advantage of parallel computing benefits of dual-core Intel Xeon processor-based platforms with the Sentaurus Parallel option to reduce simulation time.

Synopsys TCAD tools are used by process and device engineers at substantially all major semiconductor companies to develop and optimize semiconductor technologies. Customers also use these tools to identify potential yield problems that need to be addressed before and during volume production. Through proper calibration with prototype wafers and measurement data, TCAD tools can accurately predict the behavior of silicon in the manufacturing line for advanced technology nodes. This information, coupled with design tools, enables Synopsys to reach beyond traditional EDA boundaries and identify and address manufacturing problems early in the design process. Ultimately, higher yield can be achieved with Synopsys' bidirectional link that provides a bridge between design and manufacturing, all the way from place-and-route to physical verification, resolution enhancement technology (RET), mask optimization and TCAD.

About Synopsys TCAD

Technology CAD (TCAD) refers to the use of computer simulation to model semiconductor processing and device operation. TCAD provides insight into the fundamental physical phenomena that ultimately impact performance and yield. The Synopsys DFM solution incorporates TCAD to provide a bidirectional link between manufacturing and design.

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 has its headquarters in Mountain View, California and has offices in more than 60 locations throughout North America, Europe, and Asia. Visit Synopsys online at <http://www.synopsys.com/>.

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