Synopsys Implements New High-Speed, Design-to-Mask Data Processing Software for TSMC Advanced Process Technologies

New Synopsys PCX Technology Reduces Design-to-Mask Cycle Time for Designs in TSMC Advanced Technologies

MOUNTAIN VIEW, Calif., Nov. 13 /PRNewswire-FirstCall/ -- Synopsys, Inc. (NASDAQ: SNPS), a world leader in software and IP for semiconductor design and manufacturing, today announced that Taiwan Semiconductor Manufacturing Company Ltd. (TAIEX: 2330; NYSE: TSM) successfully implemented Synopsys' new PCX technology to reduce design-to-mask cycle-time for its advanced process technologies. Proteus-CATS® data eXchange (PCX) technology is a highly scalable parallel interface technology designed to reduce data communication overhead and turnaround time between Synopsys' Proteus optical proximity correction (OPC) and CATS mask data preparation (MDP) software. The advantage of TSMC's in-house mask services can be further enhanced by shortening the mask making cycle time, which will be difficult for the merchant maskshops to match.

Developed for both the GDS and OASIS library data formats, PCX technology is capable of processing hundreds of gigabytes of post-OPC data with almost zero MDP input overhead. PCX technology includes user-defined, scheduling-based, workload management options for data processing optimization. Additionally, PCX technology helps ensure that data integrity is maintained during the OPC to MDP transfer.

"Minimizing data I/O and providing an integrated OPC and mask data preparation solution plays an increasingly critical role in reducing the total cycle time for mask synthesis and mask data preparation," stated Wolfgang Fichtner, senior vice president and general manager, Silicon Engineering Group, Synopsys. "Our recent implementation of PCX technology for TSMC reflects Synopsys' strong commitment to both technology and performance leadership with products that help ensure our customers' overall success."

As process geometries continue to shrink, the resulting increases in design complexity and chip pattern density have fueled a data explosion for advanced semiconductor designs. This growing volume of data can lengthen both product development cycles and overall time to market. Two areas in the production flow that are most adversely affected include mask synthesis (OPC, RET) and MDP.

"Synopsys PCX is the result of a technical collaboration with TSMC to provide a streamlined architecture and data transfer from OPC to MDP," said Kuo Wu, deputy director of Design Service Marketing at TSMC. "We've seen encouraging results integrating PCX technology with the TSMC advanced technology production flow, which should reduce overall production turnaround time to directly benefit our customers."

Availability

Currently, PCX is supported on the Proteus 2006.09 and CATS 2006.09 software versions. PCX technology is compatible with the following platforms in multi-threaded and distributed processing modes: x86-64 with RHEL or SLES.

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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