Synopsys' IC Validator Distributed Processing Accelerates Signoff Physical Verification of Mellanox Design

IC Validator Delivers Near-Linear Distributed Processing Scalability

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Highlights:

- IC Validator used for full foundry signoff DRC, LVS and DFM verification
- Delivered near-linear distributed processing scaling on 100+ million-instance design
- Included customized DFM rule verification for added reliability

Synopsys, Inc. (Nasdaq:SNPS) today announced that IC Validator used advanced multi-processing techniques to speed up the design rule checking (DRC) of Mellanox's latest design. IC Validator completed the signoff physical verification using TSMC's 28nm signoff runset and reduced the DRC elapsed time for this large design to under 14 hours by automatically distributing the job over 28 processor cores. IC Validator's high-productivity multi-processing was also used to speed up layout versus schematic (LVS) correctness checking and to perform customized design for manufacturability (DFM) and dummy metal fill on the design.

"We ran our design on 28 processor cores and found IC Validator to deliver near-linear scalability, reducing DRC run time," said Ofer Ezra, principal engineer at Mellanox. "We achieved further productivity gains by writing a customized dummy metal fill runset for IC Validator that gave us additional reliability advantages on our on-chip power distribution network."

IC Validator is a comprehensive physical verification product including design rule checks (DRC), layout-vs.-schematic (LVS) checks, double-patterning checks and metal fill insertion. IC Validator's modern architecture and excellent multi-core scalability make it the signoff tool of choice for a growing number of designers developing small analog chips to those designing the largest, most advanced digital chips.

"A growing number of companies are seeing the benefits of physical verification signoff with IC Validator," said Bijan Kiani, vice president of marketing for Synopsys' Design Group. "The successful tapeout of this large design reinforces the viability of IC Validator as a signoff product that enables significantly reduced time to tapeout for our customers."

About Synopsys

Synopsys, Inc. (Nasdaq:SNPS) is the Silicon to Software™ partner for innovative companies developing the electronic products and software applications we rely on every day. As the world's 16th largest software company, Synopsys has a long history of being a global leader in electronic design automation (EDA) and semiconductor IP, and is also a leader in software quality and security testing with its Coverity® solutions. Whether you're a system-on-chip (SoC) designer creating advanced semiconductors, or a software developer writing applications that require the highest quality and security, Synopsys has the solutions needed to deliver innovative, high-quality, secure products. Learn more at www.synopsys.com.

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