

Anchor Semiconductor Announces Pattern-Based OPC Acceleration Tool for Time and Cost Saving in Mask Synthesis Flow

Benefits Include Easy Adoption, Large Performance Gain, Lower Cost of Ownership, and Improved OPC Quality to Significantly Reduce Computational and Economical Burden of Model Based OPC Process

SANTA CLARA, Calif. — Feb. 11, 2009 — Anchor Semiconductor Inc. today introduced an easy-to-adopt Optical Proximity Correction (OPC) acceleration tool that will significantly shorten OPC cycle time and reduce OPC tool license usage through its proprietary pattern-centric approach. The tool analyzes design space geometry information to create a unique pattern library and reuses OPC data for matched patterns in the library to improve performance efficiency. The tool does not require additional work on OPC models and recipes so that adoption is simplified.

NanoScope™ Pattern-Based OPC Accelerator (POA) was developed in collaboration with Anchor's leading-edge customers and is a natural application extension of the company's NanoScope™ pattern-centric platform. On a pattern-by-pattern basis, NanoScope™ POA extracts OPC from existing post-OPC data generated by customers' existing OPC tools and saves them in the pattern library. When there is a pattern match, OPC of the pattern is quickly retrieved from the library and installed in new designs. Therefore, OPC accuracy is guaranteed by the input post-OPC samples. There are no additional OPC models and recipes needed for using this tool. The OPC pattern library can be built up incrementally. The more complete the OPC pattern library, the more performance gain is recognized.

NanoScope™ POA is a significant cost and time saving tool for model-based OPC. The tool provides users at least 10 times the performance gain for logic designs over conventional OPC flow. More significant performance gains (at least 100 times) are expected for designs with highly repeated cells and patterns, such as memory designs. "By adopting NanoScope™ POA, high volume production users can easily cut their existing OPC tool usage by 50% or more," said Dr. Chenmin Hu, CEO of Anchor Semiconductor. "We are seeing a growing problem where OPC users at every new technology node must double OPC tool licenses and CPU numbers in order to complete one layer of OPC generation within a few days." Switching tool vendors can be costly since OPC tool qualification can take much time and effort to fully complete. NanoScope™ POA accelerates the process by pattern based OPC reuse which does not require additional work on models and recipes, the most time consuming areas of OPC tool qualification.

In addition to significant performance acceleration and lower cost of ownership, NanoScope™ POA improves model-based OPC correction quality. The tool produces more consistent OPC results compared to conventional model-based flow. It guarantees that the same patterns have the same OPC corrections regardless of pattern or cell orientation, which overcomes OPC convergence issues and makes a tight CD budget easily achievable.

“NanoScope™ POA has undergone rigorous testing at our customer sites for multiple full chip designs and is ready for adoption in the global market for customers pursuing cost savings and performance improvement of their existing model based OPC flow,” said Dr. Chenmin Hu.

NanoScope™ POA is available now for customer evaluation. The tool runs on the Linux operating system, with no special hardware requirements.

About Anchor Semiconductor

Founded in late 2000 and headquartered in Santa Clara, California, Anchor Semiconductor, Inc. is a pioneer and technology leader in semiconductor DFM software products for advanced applications in layout-to-silicon pattern transfer. The integrated pattern-centric NanoScope™ DFM platform is uniquely capable of providing solutions to the patterning challenges in semiconductor design hot-spot checking, OPC and OPC verification, photomask making, silicon wafer printing and defect inspection. Using Anchor’s tools, customers have successfully shortened time-to-yield and time-to-profitability. For more information visit www.anchorsemi.com.

Company Contact:

Malinda Law

Anchor Semiconductor, Inc.

Tel: (408) 986-8969

malinda.law@anchorsemi.com

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