Synopsys TetraMAX ATPG Diagnostics Now Linked With Synopsys Odyssey Yield Management System

Link Will Help Accelerate Yield Ramp of High-Volume Production ICs

Synopsys, Inc. (NASDAQ: SNPS), a world leader in semiconductor design software, today announced the development of links between its TetraMAX® automatic test pattern generation (ATPG) diagnostics and its Odyssey yield management system (YMS) for accelerating yield ramp at foundries. These links will enable high-throughput export of test failure diagnostics generated by the TetraMAX tool into the Odyssey YMS. Foundries will benefit from this ability to analyze vast amounts of diagnostics data generated from volume production runs (a capability often referred to as "volume diagnostics") to steadily improve process yield. Their fabless clientele will also benefit through earlier access to high-yielding nanometer processes, and through faster ramp-to-volume of individual products. Synopsys will demonstrate the technology at this year's International Test Conference (ITC) in Santa Clara, Calif., October 24-26 (booth #112).

"Synopsys considers high-throughput linkage between failure diagnosis data and yield management systems a critical step toward the realization of full- volume diagnostics for production runs," noted Dr. J. Tracy Weed, director of the Manufacturing Enabling Products Group at Synopsys. "The link between TetraMAX diagnostics and Odyssey YMS will benefit both foundries and fabless companies by accelerating yield ramp of their high-volume production ICs."

Faster yield ramp depends on the ability to gather cumulative failure statistics across wafer lots and take corrective actions. The TetraMAX diagnostics quickly and accurately identify logic in a design that could contribute to observed mismatches in the ATPG pattern set. The Odyssey YMS cross-correlates data sets, exploiting data mining capabilities to identify underlying physical mechanisms for yield loss. However, collecting diagnostics information for all failing devices in a high-volume production run and building a database to analyze and correlate the failure data has traditionally been a manually-intensive and time-consuming process. The TetraMAX-Odyssey link is designed to streamline yield management of production ICs by facilitating real-time collection and analysis of high-volume failure data extracted from multiple die and wafer lots.

"For years, the TetraMAX solution has provided designers the ability to quickly and accurately diagnose parts with scan test failures," said Graham Etchells, director of test marketing, Synopsys Implementation Group. "Now we are seeing the TetraMAX solution deployed at leading foundries worldwide as an essential ingredient of their yield learning platforms for nanometer processes. The TetraMAX-Odyssey link is a key enabling technology that will increase the effectiveness of volume diagnostics and streamline the use model."

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 is headquartered in Mountain View, California, and has more than 60 offices located throughout North America, Europe, Japan and Asia. Visit Synopsys online at www.synopsys.com .

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