



Applied Materials and Magma Integrate CAD and Inspection Systems for Faster Yield Ramp at Advanced Nodes

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SANTA CLARA, Calif., February 28, 2011 - [Applied Materials, Inc.](#) and [Magma Design Automation, Inc.](#) announced today that they have integrated Magma's CAD (computer-aided design)-based [navigation and yield analysis software](#) with Applied's [advanced inspection systems](#). This unique combination of design and manufacturing tools has accelerated lithography qualification and improved chip yields at multiple customers for the development and production of advanced technology nodes.

"The introduction of CAD-based inspection technology for defect analysis and monitoring at [GLOBALFOUNDRIES](#) Fab 1 has helped improve defect management efficiency and reduce cycle time for process optimization," said Remo Kirsch, manager of Contamination Free Manufacturing at GLOBALFOUNDRIES Fab 1 in Dresden, Germany. "Both our production and development lines now rely on this technology to help guarantee process quality and yield stability."

As device features shrink, achieving acceptable yields becomes increasingly challenging. Complex interactions between process conditions and design produces "hot spots" - areas where the printed pattern deviates from the design intent - which must be eliminated before a chip can go into production. Integrating design and real-time inspection data provides customers with an innovative way to identify hot spots in a production environment and improve their product qualification process. In addition, the conditions that produce hot spots can be fed back to the design process - improving subsequent designs. This is a critical benefit in today's fast-changing, high-mix chip fabrication operations.

"As product development cycles become shorter and shorter, the game has changed from yield maximization to yield ramp," said Ronen Benzion, vice president and general manager of Applied's Process Diagnostics and Control Business Unit. "Our groundbreaking work with Magma will help our customers speed their new products to market and reduce time-to-revenue."

"Without the ability to overcome litho qualification roadblocks rapidly, 22nm designs will be extremely time-consuming and expensive to bring to volume production," said Ankush Oberai, general manager and vice president of Magma's Fab Analysis Business Unit. "By combining Magma's CAD-based analysis technology with Applied's advanced defect inspection and review systems, we can compress design cycles and accelerate learning for future product generations."

About Magma

Magma's electronic design automation (EDA) software provides the "Fastest Path to Silicon"(TM) and enables the world's top chip companies to create high-performance integrated circuits (ICs) for cellular telephones, electronic games, WiFi, MP3 players, digital video, networking and other electronic applications. Magma products are used in IC implementation, analog/mixed-signal design, analysis, physical verification, circuit simulation and characterization. The company maintains headquarters in San Jose, Calif., and offices throughout North America, Europe, Japan, Asia and India. Magma's stock trades on Nasdaq under the ticker symbol LAVA. Follow Magma on Twitter at [www.Twitter.com/MagmaEDA](#) and on Facebook at [www.Facebook.com/Magma](#). Visit Magma Design Automation on the Web at [www.magma-da.com](#).

About Applied Materials

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in providing innovative equipment, services and software to enable the manufacture of advanced semiconductor, flat panel display and solar photovoltaic products. Our technologies help make innovations like smartphones, flat screen TVs and solar panels more affordable and accessible to consumers and businesses around the world. At Applied Materials, we turn today's innovations into the industries of tomorrow. Learn more at [www.appliedmaterials.com](#).

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