



partnering for process control

Company Contact:

Dror David, Chief Financial Officer
Nova Measuring Instruments Ltd.
Tel: 972-8-938-7505
E-mail: info@nova.co.il
<http://www.nova.co.il>

Investor Relations Contacts:

Ehud Helft / Kenny Green
CCG Investor Relations
Tel: +1-646-201-9246
E-mail: nova@ccgisrael.com

Nova Unveils Multi-Channel NovaMARS[®] Software Engine for Advanced 3D Structures

REHOVOT, Israel, July 12, 2011 - Nova Measuring Instruments Ltd. (NASDAQ: NVMI) provider of leading edge stand-alone metrology and the market leader of integrated metrology solutions to the semiconductor process control market, today introduced its fifth generation of the award-winning NovaMARS Optical CD application development solution. The new NovaMARS 5.0 is geared towards addressing the industry's transition to novel chip design concepts such as 3D gates, recently introduced as part of the transition to sub-30nm technology nodes, in both memory and logic. The NovaMARS 5.0 is optimized for speed of recipe development, ease of use, and accuracy of solution for the most complex 3D scatterometry applications for the 2x and 1x technology nodes.

The new NovaMARS 5.0 scatterometry engine has the ability to combine data from multiple optical channels directly on the tool during measurement. This multi-channel capability complements existing Holistic Metrology elements, which are part of Nova's product offering, such as injection, multi-stack, and global fit. Together, these elements provide the most comprehensive algorithmic solution to date for the development of scatterometry applications. More detailed reproduction of complex 3D structures is now possible by extraction of fine shape parameters, enabling process control of advanced devices like FinFET non-planar transistors.

Algorithmic advancements on NovaMARS 5.0 provide significant reduction in time to solution. Included is a new NovaMARS StackMaker[™] designer for scatterometry models that allows simple drag-and-drop design and visualization of very complex 3D device geometries, making it easy for users to track and implement design and process changes into existing models, as well as create new models. The industry-leading NovaMARS MatMaker[™] materials characterization package, already implemented in previous NovaMARS versions, receives an order-of-magnitude faster regression engine allowing for fast convergence to the correct materials and correct solution. Multiple enhancements to spectral matching routines complete the package.

"Since its introduction more than a decade ago scatterometry has made significant progress towards maturity. Originally billed as a faster and more cost-effective replacement to incumbent CD-SEM technology, today scatterometry is able to measure embedded details and critical profile parameters of complex 3D device structures. Reliable measurements of such details, that are practically invisible by any other technique, make scatterometry an



indispensable instrument for both device development and process control”, said Eitan Oppenheim, Executive Vice President, Global Business Group.

“Advanced process development is characterized by frequent changes to structures and metrology requirements. Scatterometry solutions have to keep up by providing fast and accurate profile information. By speeding up recipe creation and allowing timely device profile measurements, NovaMARS 5.0 now enables our customers to utilize the power of scatterometry to shorten the process development cycle. Users will experience up to 10 times improvement in time to solution when using the new version. In conjunction with the new Nova T600 measurement tool, NovaMARS 5.0 users achieved a 4 times improvement in measurement sensitivity to critical parameters of complex applications”.

NovaMARS 5.0 is compatible with existing NovaScan and T-platform scatterometry tools, and is a critical enabler for the new Nova T600 measurement tool.

For additional details about NovaMARS 5.0, please visit www.nova.co.il.

About Nova: Nova Measuring Instruments Ltd. develops, produces and markets advanced integrated and stand alone metrology solutions for the semiconductor manufacturing industry. Nova is traded on the NASDAQ & TASE under the symbol NVMI. The Company's website is www.nova.co.il.

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding trends, demand for our products, expected deliveries, transaction, expected revenues, operating results, earnings and profitability. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied in those forward looking statements. These risks and other factors include but are not limited to: our dependency on two product lines; the highly cyclical nature of the markets we target; our inability to reduce spending during a slowdown in the semiconductor industry; our ability to respond effectively on a timely basis to rapid technological changes; our dependency on OEM suppliers; our ability to retain our competitive position despite the ongoing consolidation in our industry; risks associated with our dependence on a single manufacturing facility; our ability to expand our manufacturing capacity or marketing efforts to support our future growth; our dependency on a small number of large customers and small number of suppliers; our dependency on our key employees; risks related to changes in our order backlog; risks related to the financial, political and environmental instabilities that may affect our sales in Asia; risks related to our intellectual property; changes in customer demands for our products; new product offerings from our competitors; changes in or an inability to execute our business strategy; unanticipated manufacturing or supply problems; changes in tax requirements; changes in customer demand for our products; risks related to currency fluctuations; and risks related to our operations in Israel. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading “Risk Factors” in Nova’s Annual Report on Form 20-F for the year ended December 31, 2010 filed with the Securities and Exchange Commission on March 30, 2011. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Measuring Instruments Ltd. does not assume any obligation to update the forward-looking information contained in this press release.
