

SoftJin's NxDAT Mask Defect Analysis Software combines Mask Inspection and Design Automation worlds

User friendly, high throughput Mask Defect Analysis Software for Mask Shops and Wafer Fabs

SANTA CLARA, Calif. (USA) & BANGALORE, India – 25th September 2008 - SoftJin, a provider of Customized Automation software for Electronic Design and Manufacturing, announces **NxDAT**, software for efficient Analysis of Defects identified by Mask Inspection Systems. The software includes features for easy and fast defect navigation, visual display, defect selection and filtering, defect classification, clustering, sophisticated CD analysis, analysis over multiple Inspections, Repeatability and Trend Analysis. These features along with automatic generation of reports, charts, graphs, image mosaics and paretos significantly improve the productivity of the mask inspection operators. The software supports several types of defect analyses including Die-to-Die and Die-to-Database thereby making it applicable at both Mask Shops and Wafer Fabs. The features such as automatic grid detection, comparison of actual detection line against the expected detection line and repeatability analysis on test masks allow NxDAT to be used also for calibrating the Mask Inspections Systems to check their defect detection capabilities.

NxDAT's "open architecture" makes it easily extensible to support multiple Mask Inspection tools from different vendors. A unique Plug-In interface to NxDAT enables Users to add their own proprietary defect analysis and image processing algorithms as well. Based on SoftJin's *Nirmaan* Post Layout Software Development Toolkit Platform, NxDAT combines Mask Inspection and Design Automation worlds by supporting correlation of defect data on reticles with Design layout data in any major industry standard Layout and Mask Data formats.

"Industry data suggests that Mask Inspection represents the second biggest component of Mask Cost as well as Mask Turnaround Time after Mask Writing. Since the Mask Inspection machines are expensive, the mask inspection time is the biggest factor that determines the mask inspection cost. Ever decreasing Defect size targets lead to more sensitive mask inspection across the chip, thus generating too many defects and more operator time is spent in analyzing and disposition of defects. With a wide variety of fast, user friendly defect analysis features, NxDAT drastically

reduces operator analysis time and greatly improves correct classification and disposition of defects”, says Dr. Ravi Pai, Managing Director and Chief Architect (Post Layout EDA), of SoftJin Technologies.

While NxDAT’s open architecture makes it easily extensible to support Mask Inspection Systems from different vendors, SoftJin is launching NxDAT initially with support for Applied Materials’ new Aera2™ Mask Inspection System. “Offline defect analysis is a key component of mask inspection system productivity. We use NxDAT for the Aera2™ mask inspection system and find it to be user-friendly and feature-rich software. We are also very pleased with the product customization and support that SoftJin has provided in order to make NxDAT highly usable for our mask inspection system” says, Mark Wagner, General Manager, Mask Inspection Division from Applied Materials.

NxDAT is now available for evaluation by Mask Shops and Wafer Fabs. SoftJin will be featuring NxDAT at booth #314 at the SPIE Photomask Technology Conference from Oct 7-8, 2008 at Monterey, California, USA. SoftJin is under discussions with various equipment vendors for extending NxDAT to support their systems. SoftJin with its vast experience in providing customized Automation software development services is ideally placed for integrating NxDAT into the customers’ manufacturing environment and providing customized features as per the customers’ specific needs. This brings unique and unmatched value to the customers as each customer has unique requirements in terms of features and integration.

Key Features of NxDAT are summarized below:

- Easy and fast defect navigation, visual display, defect selection and filtering, defect classification and measurement, automated clustering of defects, Repeatability and Trend Analysis
- Sophisticated Image Analysis with cross-section and CD analysis
- Refreshing of defect files allows incremental defect analysis
- Analysis over multiple inspections – intended to allow different inspections to be carried out using mask inspection machines from different vendors
- Automated grid line detection and detection line determination for test masks
- Automatic generation of reports, tables, charts, graphs, image mosaic and paretos

- Supports correlation of defect data with Layout/Mask data in GDSII, OASIS, OASIS.VSB and MEBES format. Other Mask data formats are intended to be supported shortly.
- Supports various types of defect analyses including Die-to-Die and Die-to-Database
- Allows importing, attaching and analysis of images from external tools such as Review Tool or CD-SEM tool
- Plug-In interface enables Users to add their own proprietary defect analysis and image processing algorithms. SoftJin can also develop customized plug-ins for the specific needs of the end customer.
- Features in NxDAT can be enhanced with specific needs of the end customer using SoftJin's customized software development services.

For more details and product data-sheet, please contact sales@softjin.com

About SoftJin

SoftJin Technologies develops Innovative and Customized Automation software for Electronic Design and Manufacturing. Post Tape-out Electronic Design Automation (EDA) is a special focus area where SoftJin offers several Software Products and Software Components that address the challenges associated with IC Layout / Mask Data Processing and Analysis at 65nm technology and below. SoftJin's software products also serve as embedded components, Analysis and productivity enhancement tools for Lithography and Inspection equipments. More information is available at

http://www.softjin.com/html_new/postlayout_eda_products_overview.html

The company's headquarters are located at Unit No: 102, Mobius Tower, SJR I - Park,

EPIP, White Field, Bangalore – 560066, Tel: +91-80- 41779999, E-mail: sales@softjin.com

The USA office is located at 2900 Gordon Ave, Suite 100-11, Santa Clara, CA 95051, Tel: (408)

773-1714, Email: sales_us@softjin.com

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News Contact:

SoftJin:

(US) Kumar Venkatramani, +1-408-386-2385, kv@softjin.com

(India) Kamal Aggarwal, +91-99800-11955, kamal@softjin.com