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Test Advantage's Next Generation Streetwise™ Technology Maximizes DPPM Reductions: Adds Multi-flow to Comprehensive Outlier Detection

With the industry striving for zero defects, Streetwise™ provides a fully scalable, user-configurable, production-proven solution

TEMPE, Ariz. — November 17, 2005 — Test Advantage Inc., a technology leader providing automated, comprehensive, in-line data analysis technology for the semiconductor industry, unveiled today its next generation Streetwise™ Production and Streetwise™ Engineering software solutions at the opening of the annual International Test Conference (ITC) here in Austin, Texas. This latest generation of the Streetwise Production and Streetwise Engineering tools complements previously released product functions for detecting parametric and geographical outliers, with additional support for multi-process flow analysis and multi-process flow bin map merge capabilities. Streetwise has maintained its unique, leading-edge outlier device identification methodologies, which provide the user with unprecedented confidence in outlier device detection and validation so that users do not scrap good devices or unnecessarily sacrifice production yield.

Today data processing is far and away more advanced than it was 10 years ago. The data processing power and automation available today enables Test Advantage and indeed the industry to realize major breakthroughs by successfully identifying quality risks in production test environments. "Investment in this type of infrastructure in the back end is now not only rational but to an increasing amount of customers it is becoming a prerequisite to adding value and improving overall profitability," stated Fabrice Dechoux, chief executive officer, Test Advantage. According to many industry observers, an inflection point is being created in the industry that is being driven by ever-increasing cost-of-test concerns. "Recognizing that the back end is now rich with data provides our industry an opportunity to address many of these concerns by adding more value through fully automated, comprehensive data analysis technology," added Dechoux.

Test Advantage's "recipe-driven" approach allows the customer to configure the analysis and binning strategies to specifically address the needs of a given process, product, and/or quality policy. Streetwise solutions offer easy-to-use, fully automated production operation, ensuring that 100 percent of the data is analyzed 100 percent of the time in a 24 x 7 production environment. Available immediately, Streetwise products are offered in a variety of license configurations to fit any company's specific goals.

"The new multi-process flow analysis extends Streetwise's capabilities beyond outlier detection. It provides Test Advantage's customers with the ultimate flexibility in merging test and detected outlier binning data, maximizing our customers' flexibility in how they classify devices to their end customers," noted Dechoux. "Now our customers can determine, with a higher degree of confidence, the reliability of 'Bin 1' or 'Passing Devices' — a crucial must-have for companies with strict quality standards like the automotive industry. As with all our products, Streetwise adds superior value to the semiconductor device manufacturer by maximizing test effectiveness at the wafer-sort and final test processes. Customer return on investment is huge."

The patented and patent-pending technology only found in Streetwise operates on all parametric tests performed, and automatically determines the data distributions on a per-wafer and per-test basis. Streetwise then automatically uses the appropriate algorithms to identify parametric outlier magnitudes on a per-test basis. It is also widely recognized that parametric test results are rarely symmetrical to the test limits, therefore Streetwise comprehends this and assigns outlier magnitude weightings not only relative to the data distribution, but also relative to the potentially asymmetrical test limits. As a result, the automated Streetwise process requires no engineering characterization or intervention and operates in a production environment processing wafer-to-wafer parametric data distribution shifts, maximizing the accuracy of outlier device classification.

In an industry where quality and yield are critical to a company's bottom line, Streetwise addresses these objectives by providing comprehensive outlier detection and classification technology. "Our technology offers unique device classification capabilities, which give our customers confidence that outlier device identification is accurate and that they are not scrapping good devices," commented Test Advantage's software product manager Greg LaBonte. "The Streetwise approach and proven results have also raised our customers' confidence in employing revised 'full wafer scrap' strategies, improving the overall manufacturing yield."

“As companies drive toward zero-defect-based production models, Streetwise offers a proven solution that can be easily integrated into any existing manufacturing environment for achieving these objectives,” commented Capri DeModica, president and chief operating officer of Test Advantage. “Our user-configurable data analysis capabilities, as defined by recipes in Streetwise, allow the user full control with regard to parametric outlier detection sensitivity and geographic proximity settings, specific to the process, the product, and ultimately the user’s quality policy.”

Streetwise™ Key Benefits

The Streetwise Production and Streetwise Engineering solutions provide a multitude of features designed to reduce DPPM and provide opportunities to improve yield. Some of those benefits include:

- Seamless deployment and integration within existing manufacturing environments
 - An automated in-line solution that works independently of the test systems utilized
 - Requires no engineering data characterization analysis for set-up
 - Production-ready, “out-of-the-box” data analysis solution
 - Validate your analysis and binning strategies that are defined in the recipes with Streetwise™ Engineering
- Automatic and configurable outlier detection strategies based on user-defined recipes
 - Maximum outlier detection coverage employing parametric and spatial (or geometric) methods that drive toward automated “Zero Defect” production with minimum yield impact
 - Unprecedented solution for parametric outlier detection with device classification for both Gaussian and non-Gaussian data distributions
 - User-defined sensitivity and proximity settings, which are driven by the process, the product, and the user’s quality policy
 - Meets and exceeds the objectives outlined in the AEC_Q001_Rev_C Part Average Testing (PAT) Guideline for Outlier Detection
- Fully scalable tool with automatic failover designed for the production environment
 - Extremely fast and robust, capable of handling large volumes of data in a production environment
 - Streetwise has been deployed in production since 2002 and today has multiple installations worldwide, supporting 600+ testers running production 24/7

Pricing and Availability

Streetwise is available now by contacting your Test Advantage sales representative or visiting our website at www.testadvantage.com. Many license options are available based on your company’s needs. Whether

you implement a global or site-by-site strategy, Test Advantage will evaluate your business requirements and suggest the best solution to fit your current business model. Contact Test Advantage for more details.

About Test Advantage, Inc.

Founded in 1997, Test Advantage offers hardware and software solutions to the semiconductor industry through its *Quality* ATE Division and its Software Products Division. Combining 100-plus years of in-house test hardware and software expertise, the company delivers a competitive edge to all of its clients. The *Quality* ATE Division specializes in rebuilt, Configured-to-Match™ ATE systems. The Software Products Division develops and deploys leading-edge, proprietary software to automate manufacturing quality improvements by reducing DPPM as well as software to improve test coverage and throughput. The Tempe, Arizona based company operates worldwide, maintaining operations in California, Germany, Scotland and Singapore.

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