*"Data Mining Made Easy"*

# Test Data Visualization and Analysis Tool

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In the semiconductor industry, before that chip is distributed for sale, hundreds of tests can be performed to insure product quality. With thousands of chips being produced for a product, the size of the test data can become quite substantial. Understanding this test data can allow semiconductor manufacturers to make intelligent decisions about their testing protocols. Customer returns can be reduced by adjusting the limits of tests. It may also be possible to identify superfluous tests and thereby reduce the cost of testing. However with such a volume of tests for each chip, analysis needs to be performed to determine which modifications will be most effective.
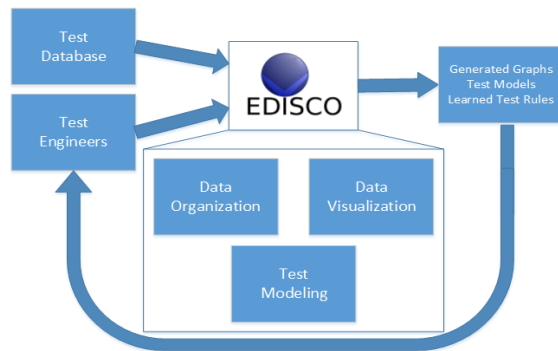
The goal of EDISCO is to assist and simplify an engineer's workflow. The tool organize the data and simplifies the engineer's interaction with the data. This aspect of the tool removes the responsibilities of data management and allows the engineer to focus on understanding of the data in a work-flow fashion. EDISCO offers a semi-automated process alternative to an ad-hoc solutions environment.

Additionally, EDISCO also outputs meaningful visual graphics based on the data, such as histograms, KDE plots, wafer heat maps, and etc. These visual outputs can be customized in various ways to further demonstrate properties of a dataset. This allows the engineers to learn and communicate abstract information more visually and effectively.
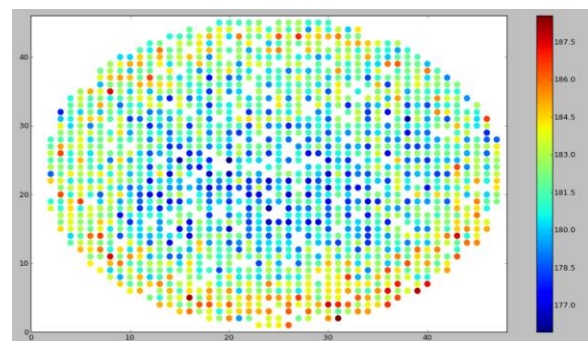
Furthermore, EDISCO also outputs learned test rules and test models for the engineer to analyze and apply back to the program. This feedback allows the engineers to further experiment with the products' test limits and testing parameters. For instance, engineers can experiment with new test rules and get an estimate of functional chips overkills. This step, among many, are ultimately designed to further reduce the cost of manufacturing the product.