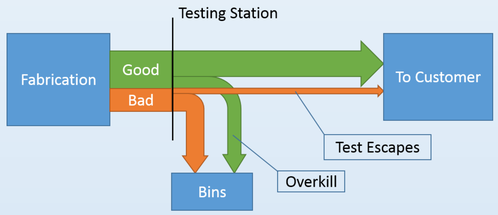
EDISCO

Overview

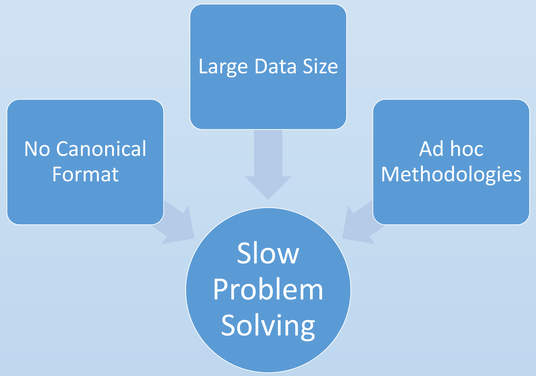


In integrated circuit production, fabricated silicon chips are tested for quality and performance.

The tests inevitably screen out chips that would not fail in use (overkill) and pass chips that are faulty (test escapes).

It is the goal of the test engineers to reduce test escapes and for yield engineers to reduce overkill.

The Problem

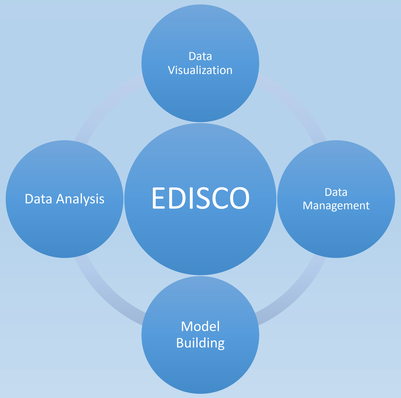


There is no standardized format for test data.

Test data is measured in the hundreds of thousands of data points.

Solutions are usually provided ad hoc and are not generalized.

What is EDISCO?



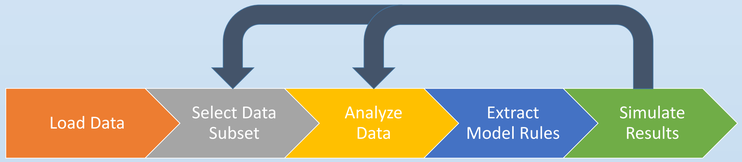
EDISCO provides a platform for managing and visualizing test data independent of the underlying format.

Our software also provides algorithms for analyzing test data.

After analysis is performed the results of any changes can be projected.

EDISCO User Workflow

Our design expects the test engineer to continue to feedback previous discoveries into their analysis. This allows an engineer the ability to start a broad search and then easily narrow down onto a problem area.

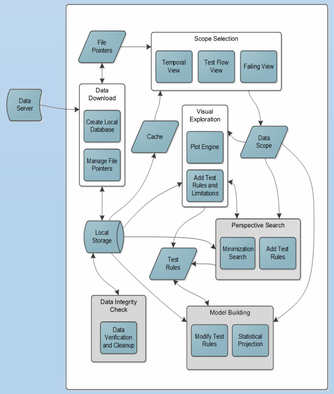


EDISCO Block Diagram

EDISCO stores working data locally and provides preprocessing and caching of time consuming operations.

The program organization follows the general EDISCO workflow.

Our software also stores the current state of the program allowing a user to continue where they stopped with a minimum of repetition.



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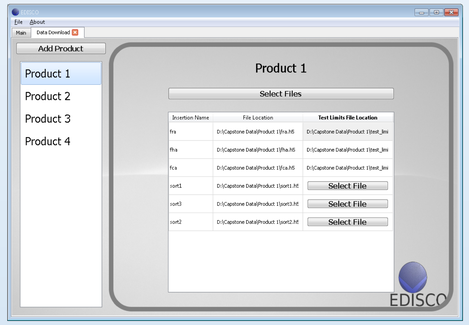
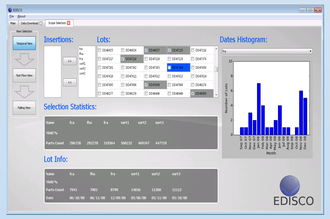
Data Organization

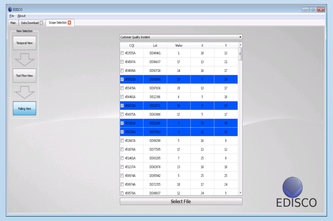
EDISCO allows the test engineers to organize the test data by the products. This unifies fragmented sets of data.

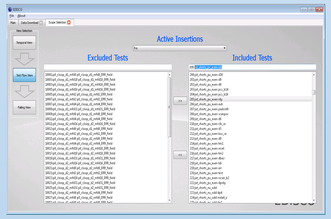


Data Selection

The user will be able to select the amount of data to analyze based on production lot, tests, or failed products. This selection can range from a global scope all the way to a single test or wafer.







Data Analysis

Numerous ways to visualize the data are used so that the test engineers can gain intuition and communicate ideas.