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iFAB(tm) Product Overview

Overview

Welcome to the new age of semiconductor and flat panel visualization, analysis and control software. Zentropic has decided to borrow the newest, proven technologies from the internet world and lend them to its customers in the form of highly innovative yet low cost and less limiting software appropriately named “iFAB”. iFAB represents a series of product modules that by themselves fulfill some of the basic needs of today’s yield enhancement, test, and process engineers. However, when used together, could provide the framework or foundation for a complete solution. **iFAB provides utilities that complete solutions.**

Zentropic believes that the semiconductor and flat panel manufacturing facilities require more than one provider of software to achieve the solution that a site desires. Gaping holes in vendor solutions are often plugged with custom scripts and code developed by the site’s own engineers. Oddly enough, many companies face the same challenges in achieving their solutions. Zentropic is using its experience in the industries to create software to fill these functionality voids, simplifying the implementation of a site solution.

How Is iFAB Different?

iFAB’s major difference from other yield analysis and machine control software out there is that its design allows for few limitations and future expandability.

1.) iFAB runs on all major operating systems

Most of today’s analysis software requires Windows NT. If you do not have an NT station what will you do? iFAB supports Windows 95, 98 NT 4 and soon Windows 2000.

Unix-lovers will enjoy that iFAB supports Sun Solaris, HP-UX and the various distributions of Linux. How can iFAB support so many platforms (and Apple and OS/2 and IBM mainframes)? iFAB is written in 100 percent Java. All the platforms mentioned above support the most current versions of the Java Virtual Machine thus able to run all the iFAB modules.

2.) iFAB can run in a web browser

Because iFAB is 100 percent Java 1.2 code and current browsers can execute Java code, iFAB can run in a properly equipped browser like Netscape, Hot Java, or Internet Explorer. Using a browser, a user can click on an iFAB icon on his company’s intranet site, download, and execute that iFAB module. Ideally, the site web administrator places the most current version of iFAB on the server insuring that all users download the latest version.

3.) iFAB can do any analysis

iFab uses Java’s ability to load code dynamically. This code can be written by anyone using any of the **free** Java compilers on the market. iFAB’s application program interface (API) allows users to utilize iFAB’s data loading capabilities, then invoke analysis packages using iFAB’s plug-in framework. iFAB simply becomes a vehicle for the data and the algorithms to meet. Most likely to be developed analysis packages include: *defect to defect overlay, defect to bit overlay, kill ratios,* and *yield projection*s in the defect and bin arenas; *adaptive test* in the test arena. What is remarkable about this plug-in architecture is that the customer is no longer a slave to a single vendor to create such analysis packages.

4.) iFAB is leased, not purchased

iFAB has built in support for a leased license. Instead of a substantial purchase price which historically requires several levels of management approval, customer can “rent” the software for a predetermined time period. at a severely discounted price. If at the end of that time period (say, six months), the customer decides that an iFAB module is no longer needed, he can let the lease and the software expire.

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5.) iFAB can speak several languages
Java has built in support for internationalization (the display of different languages). iFAB is utilizing this capability to target non-English speaking facilities. The first languages to be included are French and German, soon to be followed by Japanese, Korean, and Chinese.

6.) iFAB has customer support built in
iFAB has an internal e-mail client with mail messages pre-addressed to Zentropic Support. Additionally, a chat client is included which acts like a "Help" telephone. When invoked by the iFAB user, it rings the Zentropic chat "operator" over the internet. If Zentropic support people are logged in, the iFAB user is connected to a support resource. iFAB also has a built in web browser to view online documentation and the internet.

7.) iFAB was built to move and shape data
iFAB has built interfaces that can communicate with other network devices via FTP, HTTP, and UDP. iFAB can also compress and encrypt/decrypt file contents while moving the data via the various protocols. iFAB can easily communicate to peripheral devices via the serial and network ports. This is definitely useful for its machine control implementation.

8.) iFAB implements today's technology
Not only does iFAB utilize the Java programming language, it uses the following newer technologies:

- XML - to store setup information and data files
- Apache - the web server
- Servlets - needed to interact with users on the web server
- JPython - scripting language
- Java Swing - graphics

What are the iFAB Modules?

The iFAB modules are divided into functional areas. More detailed descriptions of the modules are in their respective product summaries. The iFAB modules are listed:

iFAB-Defect

Viewer of semiconductor inspection files. All fields of KLA-Tencor KLARF, TFF, W, and Lot files are displayed. Wafermaps of the defect regions and defects are created. The maps can be zoomed in and out, distances between defects can be measured. File formats can be converted. This is Zentropic's first released module

iFAB-Test

Production and engineering wafer test station. Communicates with testers and probers to direct die to test/bitmap, download test programs, and output test results. Possesses graphical wafer map and yield statistics display with real-time updates. A Linux iFAB-Test station is the least expensive most reliable test controller ever.

iFAB-Bit/Pixel

Provides the framework for accepting plug-ins directing bit/pixel placement, address scrambling of bitmap results, and bit failure pattern detection and classification.

iFAB-Setup

Graphical tools to setup up die and fiducial positions on a wafer and functional and logical areas within a die. Resultant files are used by iFAB-Test and iFAB-Bit to place die and bits on the wafer respectively.

iFAB-Utilities

Handy utilities to make iFAB even more useful. Included utilities are: an image manager to view and alter photographs, an FTP client to move data around the network, a word processor, a web browser, a calculator. a zip compression utility, a telnet utility, a memory usage monitor, and others too small to mention.

iFAB-Central

Database and data loader. Stores data as file references similar to the internet. Smart loader has several options in dealing with good and error files.

If iFAB interests you, please refer to additional information at the Zentropic web site at:
***www.zentropic.com**, or toll free at: 877-936-8767.*

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