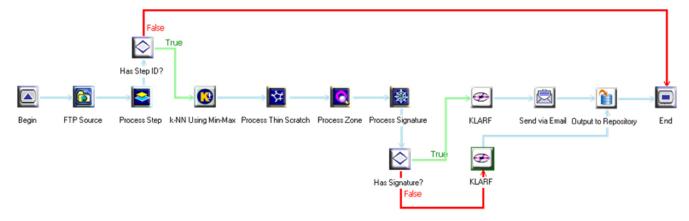
# **AWB DATA SHEET**

Automation Workbench (AWB<sup>™</sup>) is one of the main components of the SiGlaz Intelligent Defect Analysis software suite. It allows the defect engineer to automate the signature analysis methodology that he has developed using the Defect Signature Analysis (DSA) module. Using AWB, the user may automate, test and optimize the signature analysis recipe before it is transferred to production

All spatial filters and signature recognition functions that are available in the DSA module can be assembled and saved using Automation Workbench graphical programming capability. When it recognizes a defect signature, the AWB analysis recipe can be programmed to take several actions, including (1) generate an output file (e.g., KLARF or text file); (2) generate an event trigger, notifying the defect engineer by e-mail; and (3) write the recipe analysis information to a data base file.



The above recipe shows how an AWB recipe may be customized for a specific process step. The recipe utilizes three recognition techniques to identify multiple defect signatures: CMP scratch analysis, zonal analysis and object signature library. If a signature is recognized, the user is notified by e-mail.

# **Key Features**

**Easy-to-use object library**: The IDA Object signature library is an .XML reference file that may be accessed by multiple AWB recipes simultaneously. For each recipe, the user may select the desired object signatures from the library and establish the optimal order of analysis for the process step. As new signatures are added to the object library, they can be easily incorporated into the analysis recipe.

**Graphical user interface**: To create an analysis recipe, the user simply arranges the IDA functional icons in the work area and connects them in the sequence that the analysis is to be executed. The functional icons are identical to the functions of DSA. Each icon has a properties window that allows the user to input the same parameters used in the manual DSA analysis.

**Two execution modes**: The user may execute the analysis recipe in either batch mode or continuous monitor mode. In batch mode the recipe will analyze all existing files in the data source folder; in continuous monitor mode, the recipe will execute an application to monitor the folder location and analyze all files that are written to that folder while the application is running. AWB utilizes the Windows Scheduler to start and stop recipe execution.

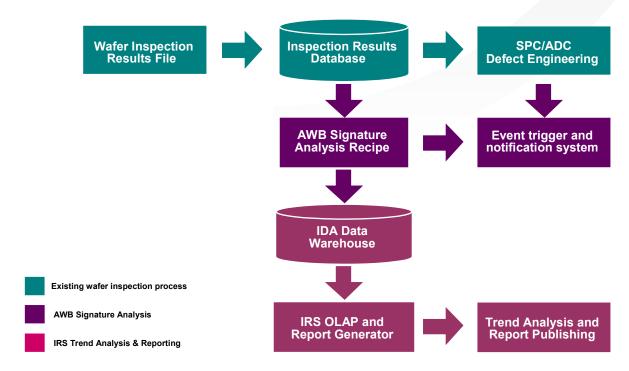
**Data source options**: The user may designate the data source for the recipe as a folder on the network (Windows or Unix) or as an FTP site on the network. The user may optionally have the recipe delete the file at the source after it has been read.



**Recipe optimization**: Once the engineer has developed an analysis methodology using DSA, he can automate it using AWB and test it over a wider range of samples than is practical using the manual analysis method of DSA. The sample set may be analyzed using different process variables to enable the engineer to converge on the optimum analysis results. An AWB recipe may be saved and edited at a later date.

**Multiple file analysis:** AWB allows the user to automatically overlay multiple wafer levels and analyze them as a single file. Wafer levels may be grouped before they are overlaid, for example by process step or wafer slot number.

**Results data repository**: AWB generates a data repository of analysis information (.mdb file). The data may be displayed in either tabular format or in a pivot table using the SiGlaz Intelligent Reporting System (IRS) module.



IDA components, Defect Signature Analyzer, Automation Workbench and Intelligent Reporting System integrate easily into the fab defect analysis process

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