ZUKEN®

CR-8000™

Design for Manufacturing
ADM

- Single fabrication and assembly checking platform for any board technology, including rigid, flex, embedded components, and LTCC

- Web-based rules manager enables easy setup of manufacturing rules

- Checking engine is embedded across tools to allow concurrent verification of manufacturing rules any time in the design process

- Validate and optimize designs to ensure requirements are met for multiple sources for manufacturing

- Over 900 rules in 96 groups to support improvement in product quality and yield

- Create additional rules through easy-to-use wizards

- Automatically generate spreadsheet report with screenshots to ease documentation and communication.
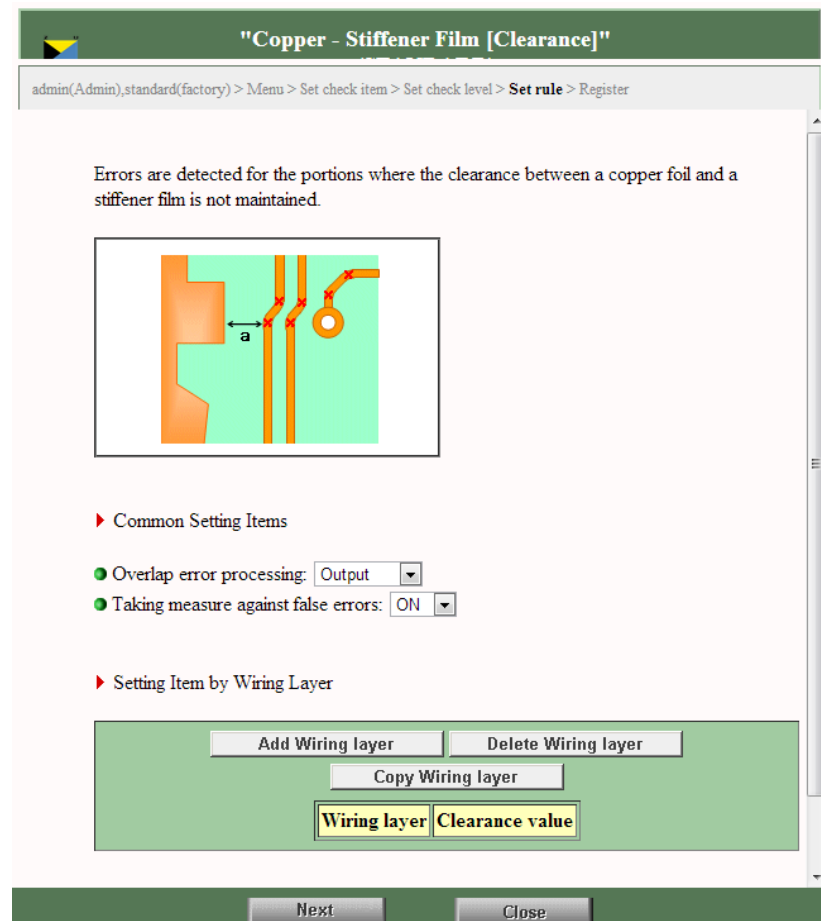
Introduction

In the design and production of electronic products, manufacturability checks are difficult to perform manually and are often made after the design process has been completed. However, the increasing costs and design/production delays caused by higher signal speeds, ecological problems and increasing global design collaboration, make this approach unsustainable.

Zuken's Advanced Design for Manufacturing (ADM) system ensures that designs have been produced in accordance with component mounting and manufacturing specifications early in the design process, and concurrently as the work progresses. The system facilitates the sharing of personal expertise using company Intranet networks, and efficiently manages the growing number of design rule checks needed to ensure manufacturability.

ADM will help users to maintain all parameters needed for checking. When changes are made to manufacturing specifications and mounting processes, rules can be easily amended and checks modified. The whole process becomes front-end driven, sharing data in real time across all departments, divisions, and companies involved in the design and development of an electronic product.
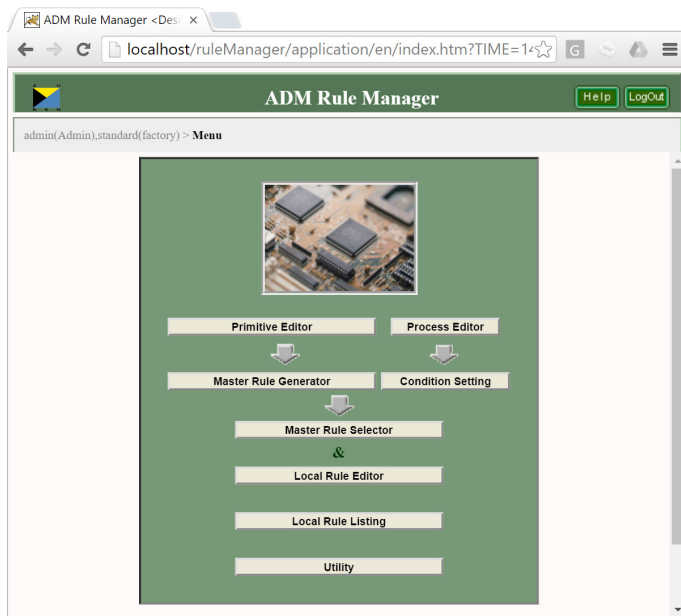

Easy setup of dedicated flexible printed circuit board rules

ADM Functionality and Tools

ADM check engine

The check engine for ADM can handle more than 900 individual checks in 96 groups. These cover both bare board manufacturability and component mount checks. The items for review are set up in collaboration with customers, to meet their specifications. It is even possible to automate the visual check process. Once implemented, there are substantial time and resource savings in the checking and verification process, producing highly accurate results, requiring less dependency upon the individual skills of operators.

Design checks are carried out simultaneously with the design process, without affecting the speed or efficiency of design work.

The web-based rules manager enables easy setup of manufacturing rules.

ADM Rule Manager

The Rule Manager at the heart of the ADM system contains more than 900 rules, and is accessible using a standard web browser. Design and manufacturing parameters held in an XML database are downloaded via this familiar interface. The user can also add information to the rules.

Because the data is held in a common, central database that can be updated in real time, constraints are always based on the latest available information for the production machines in use.

The system facilitates accurate, efficient communications between the PCB manufacturer and the assembly plant, between OEMs and design bureaus, and an OEM's headquarters and subsidiaries. Rules are presented in an easy to understand format that does not demand CAD experience to interpret.
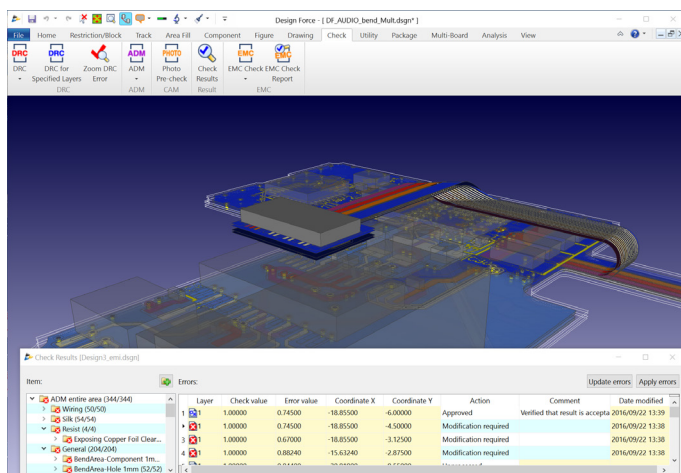
Unlimited combinations of design specifications, including place of production and production methods and materials, can be effectively managed using the Rule Manager.
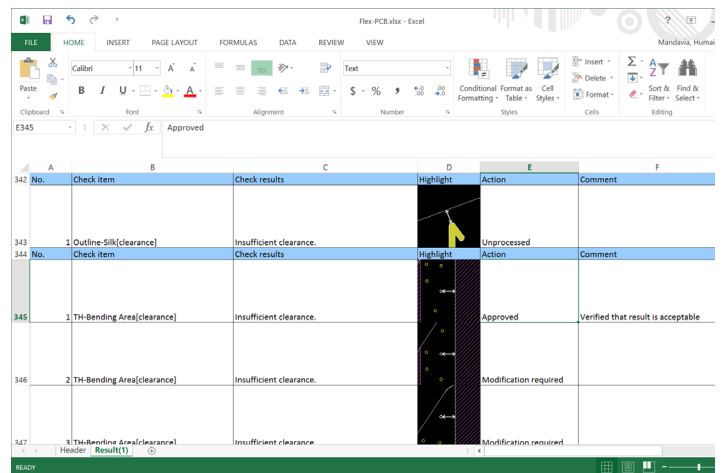
Common checking environment

ADM bridges the gap between the layout and manufacturing phase by enabling designers and DFM engineers to exchange and run rule sets using a common check engine. Users can also review and confirm that all required rules have executed and signed-off to release the design for manufacturing.

Rules from ADM can be run in CR-8000 Design Force and DFM Center, CR-5000 Board Designer, and DFM Viewer Advance.

Check results can also be imported to Board Viewer Advance and XDF Viewer to support the design review process.

Run ADM checks any time in CR-8000 Design Force to verify manufacturing

Automate spreadsheet reports with screen shots to ease documentation and improve communication on check results.

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