Design Review

Overview

Accelerating development from concept to delivery is the key to profitability for today's electronic products. Fundamental to achieving this acceleration is effective information flow within and between organizations. Proper communication ensures that all stakeholders within the product delivery chain have their needs addressed — thus eliminating defects and design re-spins. Collaboration, supported by automated solutions, enables the effective communication required to reach maximum profits.

To effectively review complex PCB schematic and layout designs many companies struggle with ineffective, time-consuming processes. Often they can only rely on unintelligent Gerber data, inflexible PDF files, or printed information to relay design review feedback between departments for collaboration. Further complicating reviews in today's global market are support of different ECAD schematic capture and layout tools and design review groups being located all around the world.

Mentor Graphics viiECAD solves these problems. Design review enables collaboration between all stakeholders in the design process. Collaboration can now effectively be achieved within design teams, between design and manufacturing groups, and within manufacturing. Passing intelligent data via a comprehensive viewer provides faster, more accurate, and easier collaboration on any design. Schematic capture and layout information is presented to the user with all the intelligence of the authoring ECAD system.

This screen shot shows the PCB layout and schematic with collaboration notes being added to both drawings

**MAJOR BENEFITS:**

- Eliminates errors and omissions by enabling review input to be provided within and between departments and organizations
- Schematic and layout collaboration enhanced through ECAD-neutral formats
- Eliminates ambiguity between departments with direct markup of the PCB or schematic
- Maximum markup clarity with redline, sticky note, hyperlinks, and embedded images
- Quickly understand differences between designs with graphical, data and netlist comparisons
- Standard HTML and custom delimited reporting option available

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Department Collaboration
The design review tool displays PCB design, schematic, and other electronic manufacturing data in a single, intelligent environment. This allows combining all relevant data and electronically sharing it, enterprise-wide, for collaborative visualization across all departments, design reviews, and manufacturing processes. Critical information is captured and provided to the right people at the right time to accelerate product introduction and profitability.

Graphical, Data and Netlist Comparison
The design-compare option provides three significant reports for design comparisons; one is a graphical layer by layer compare, an intelligent data compare and a netlist comparison. The graphical compare report analyzes a bitmap of each layer to its counterpart on another design and determines any variation between the two. The data compare performs 18 different data driven checks between the two designs and reports differences between the two. The netlist compare analyzes the netlist part of schematic or layout designs for differences in content and net names.

Collaborative Markups
A simple and comprehensive structure supports viewing and markup activities that drive collaborative efforts. Authorized users can start or participate in discussions or markups and have their comments logged for peer to peer review. The resultant file can then be used to update the layout with the necessary changes.

Complete Reporting Option
The standard HTML reporting option allows the creation of standard output reports on the design data. Design summary, placement, line length, and netlist reports are available. Also, custom output templates can be created and used to export delimited reports that can be easily read by other, downstream systems.

DRC Review Option
CCZ DRC results can be reviewed and comments entered against them. Individual or groups of DRCs can be easily converted to more detailed markup discussions as well. The reporting option can be used to export an HTML DRC report with images showing all the issues.

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