

SILVACO

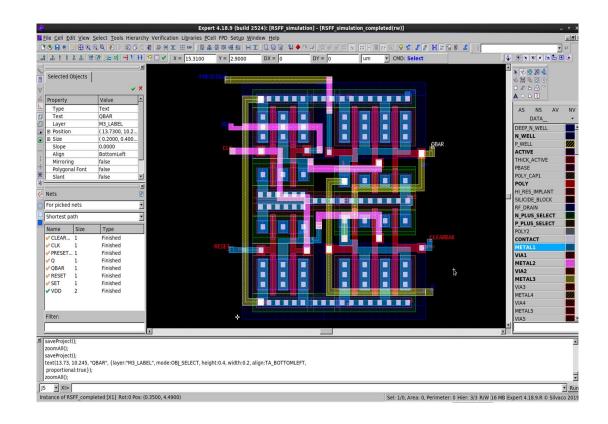
Expert
Layout Editor

Expert Overview

- Full feature, custom layout editor
- Customizable menus, and GUI
 - **Toolbars**
 - **Panels**
- Powerful Java scripting capability
- Productivity features
 DRC Assist

 - Edit-In-Place
 - Connectivity highlighting Short locator

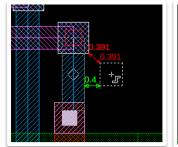
 - Embedded Layout vs Layout Flat Panel Display Features Cross-sectional Viewer
- OpenAccess and iPDK Support
- API for external control via Python scripts



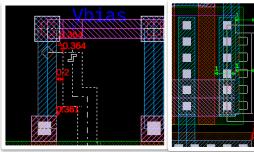


Expert DRC Assist

- Shows violations while editing layout design in real-time
 - Shows flags for the starting point
 - Works with various editing commands
 - Recognizes shapes through hierarchy
- Works with basic design rules
 - All rules are kept in the technology file
- Shows resistance of wire currently being created

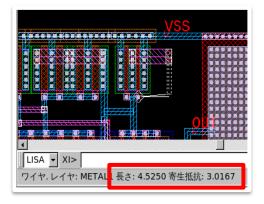


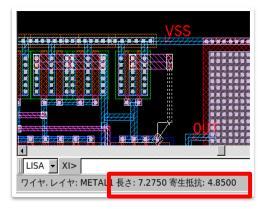
Recognizes the violation along cursor before starting



Shows error flags with numeric information

Recognizes shapes in lower cells

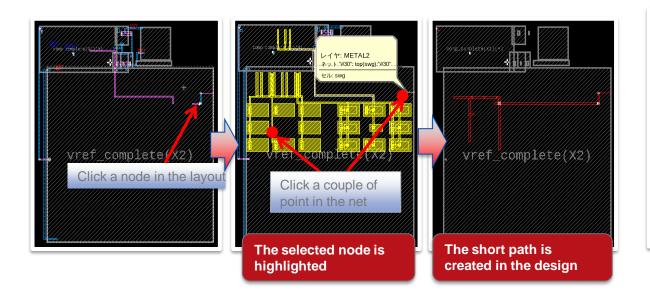


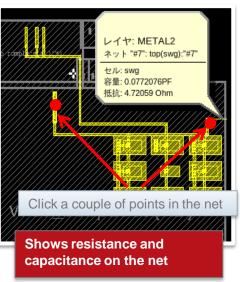




Expert Node Probing

- Shows electrically connected path with layer connectivity information
- Performs hierarchical processing for fast extraction even in a large design
- Short-locator
- Especially effective to find short between power and ground nets
- Shows resistance value between a couple of specific points calculated by Hipex



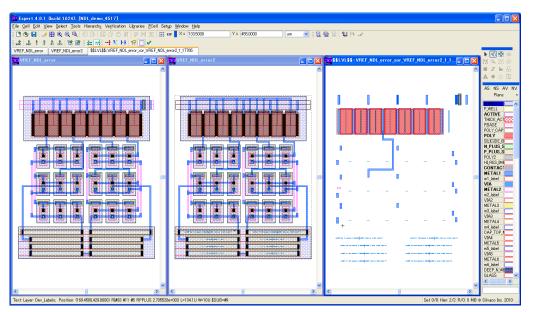




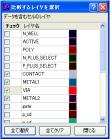
Expert **Layout Comparison**

Layout comparison (LVL = Layout vs. Layout)

- Compare two layouts
 - Show the result of AND, OR, Dif (=Not), and XOR
 - Creation of text report
 - Can restrict comparison to specific layers



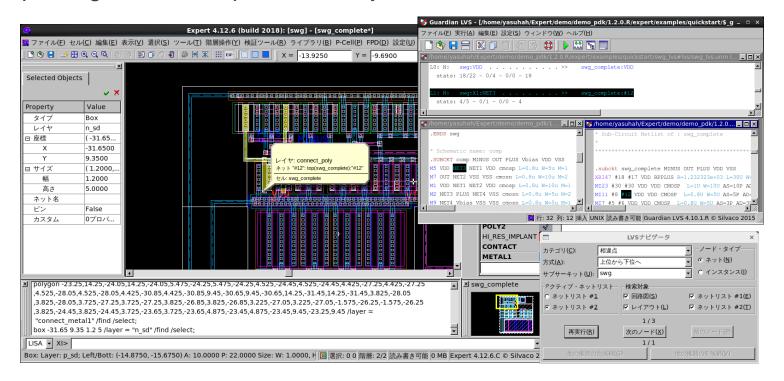




ExpertIntegration with Gateway Schematic Capture

Cross-probing with Expert and Gateway

- LVS navigators provide various comparison information
- Provides cross-probing between Expert, Gateway and SmartDRC/LVS



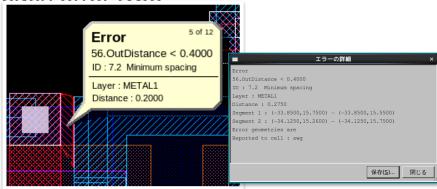


Integration with Guardian DRC Integration with SmartDRC

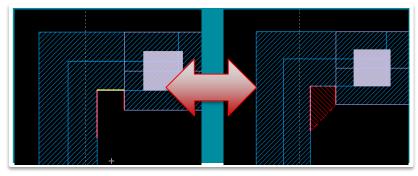
Finding detected errors in SmartDRC

- Shows details in bubble mark
- Can switch style of error flags
- Shows Next / Previous / First error
- Shows errors in fixed window

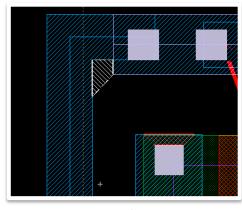
Allows setting color for each error type



Showing detailed information



Various style of error flags



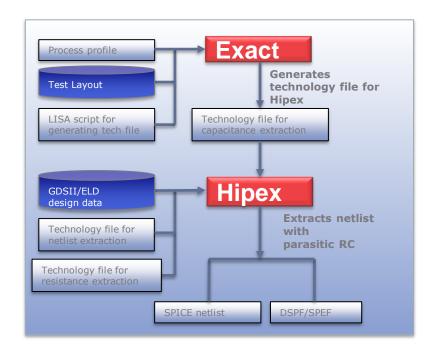
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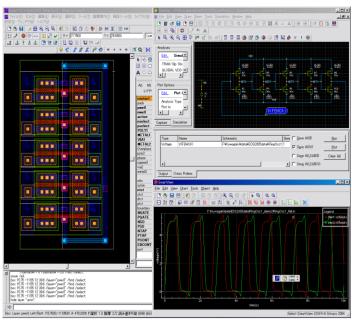


Expert Integration with Hipex

Fast and Accurate Parasitic Extraction

- Tightly bound with Expert and SmartLVS
- Back-annotation to schematic netlist



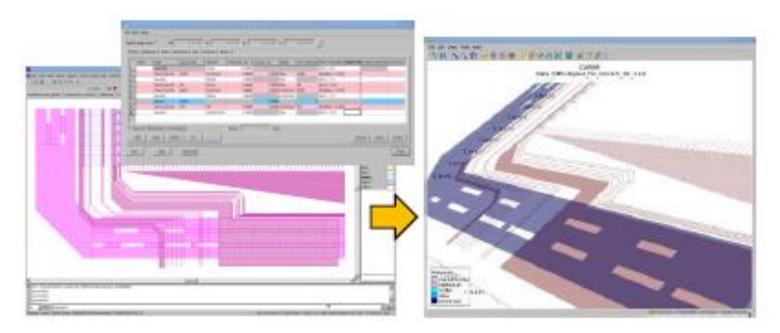




Integration with Clever Integration with Victory RCx Pro

Victory RCx Pro

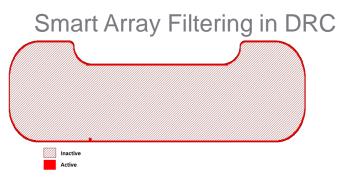
- Accurate capacitance extraction using 3D field solver
- Uses text labels to create electrodes in Clever
- Provides a feature to add text to all floating nodes automatically

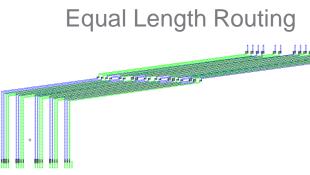


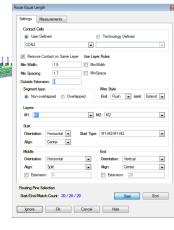


ExpertFlat Panel Display Features

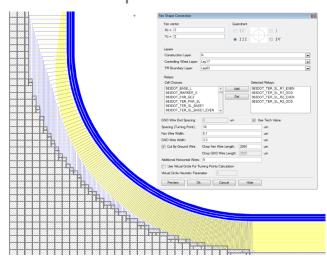
Extensive FPD features

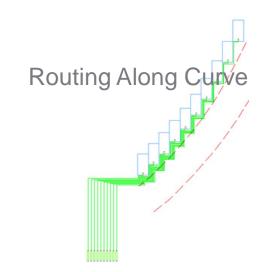


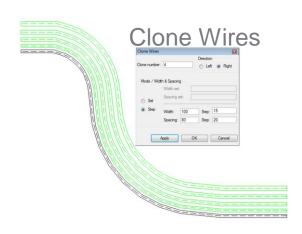




Fan Shaped Connections





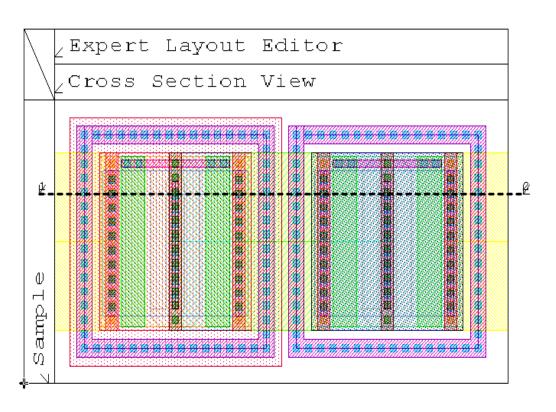


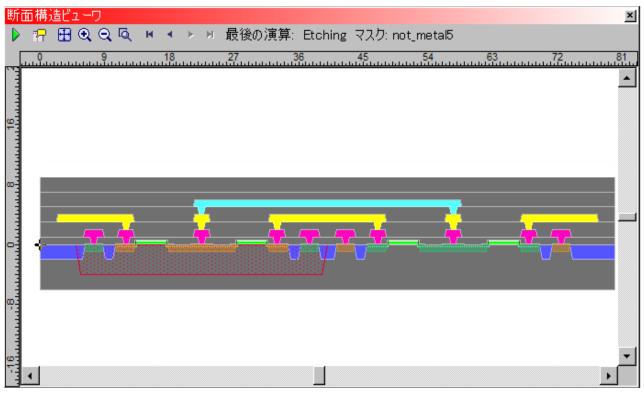


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Expert Viewer Cross-sectional Viewer

Creates the cross-sectional view of entered cut-line in the layout







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Expert Summary

- Full feature, custom layout editor
- Customizable menus, and GUI
 - Toolbars
 - Panels
- Powerful Java scripting capability
- Productivity features
 - DRC Assist
 - Edit-In-Place
 - Connectivity highlighting
 - Short locator
 - Embedded Layout vs Layout
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