

VIRTUOSO LAYOUT EDITOR

Virtuoso® Layout Editor is the industry-standard base-level custom physical layout tool of the Virtuoso custom design platform. It supports the physical implementation of custom digital, mixed-signal, and analog designs at the device, cell, and block levels.

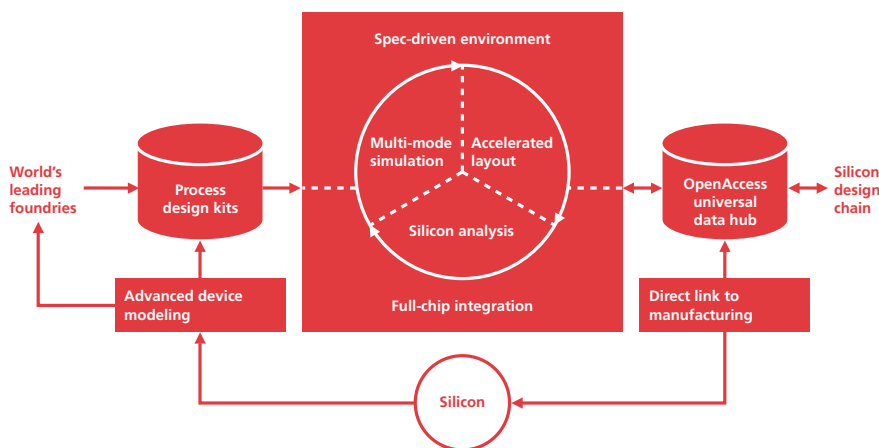


Figure 1: Virtuoso custom design platform

VIRTUOSO CUSTOM DESIGN PLATFORM

The Virtuoso custom design platform is a comprehensive system for fast, silicon-accurate design and is optimized to support “meet-in-the-middle” design methodologies such as advanced custom design. Virtuoso includes the industry’s only specification-driven environment, multi-mode simulation with common models and equations, vastly accelerated layout, advanced silicon analysis for 0.13 microns and below, and a full-chip, mixed-signal integration environment. The Virtuoso platform is available on the Cadence® CDBA database and the industry-standard OpenAccess database. With the Virtuoso platform, design teams can quickly design silicon that is right and on time at process geometries from one micron to 90 nanometers and beyond.

VIRTUOSO LAYOUT EDITOR

With Virtuoso Layout Editor, custom layout is accelerated with a comprehensive set of user-configurable and easy-to-use pure polygon layout features within a hierarchical multi-window environment. Additional acceleration is provided through optional parameterized cells (Pcells) and a powerful scripting language called SKILL that provides direct database access, tool configuration, and interoperability with other tools.

BENEFITS

- Easy creation and navigation of complex designs with unlimited hierarchy support coupled with a multi-window editing environment (see Figure 2)
- Accelerated layout entry using easy-to-use and easily accessed editing functions
- Increased productivity and design optimization using Pcells
- Efficient, high-performance handling of large designs using the OpenAccess database

FEATURES

FULLY HIERARCHICAL MULTI-WINDOW EDITING ENVIRONMENT

Virtuoso Layout Editor offers the ability to open multiple cells or blocks in any one editing session (see Figure 3), or in different views of the same design to help ensure consistency in complex designs. The integrated world viewer is an intuitive navigational aide that helps locate zoomed-in areas of detail within the context of the overall design. Performance optimized selection, zooming, redraw, and other commonly used commands increase layout productivity.

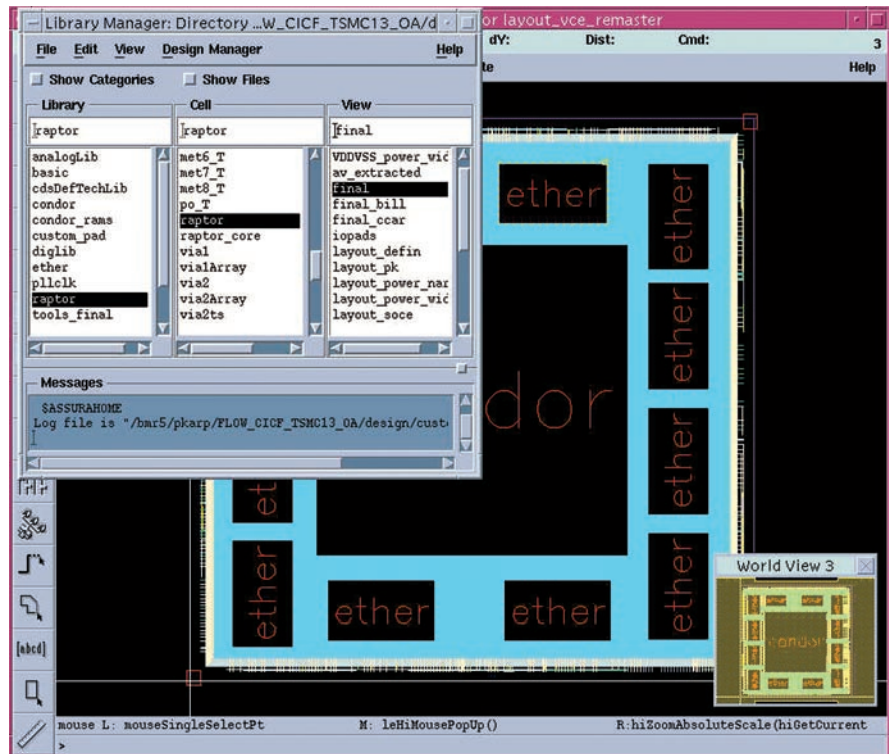


Figure 2: Easy creation and navigation of complex designs

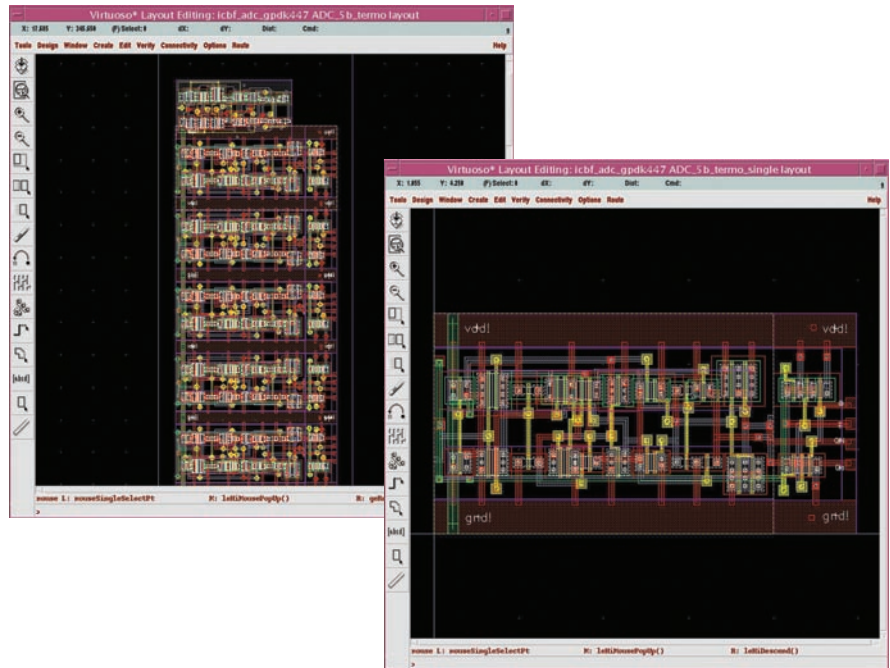


Figure 3: Hierarchical multi-window editing

FLEXIBLE PCELLS

Pcells reduce design entry time and design rule violation and provide an accelerated level of design automation to minimize tedious and repetitive layout tasks. Pcells support the changing of the size, shape, or contents of each cell instance without changing the original cell. They raise the level of abstraction to the component level and simplify complex shapes and devices that can be generated, edited, and managed with variable settings thus accelerating layout tasks and reducing design violations.

HIGHLY-CUSTOMIZABLE EDITING ENVIRONMENT

The architecture and implementation of the Cadence Design Framework II and the new OpenAccess database provide Virtuoso Layout Editor with a customizable custom layout editing environment and features. This is made possible through support of the flexible, powerful SKILL programming language. SKILL allows direct access to the design database and tools to meet the custom design requirements of any custom design methodology or process technology. Additionally, the OpenAccess

database version supports a 'C' based API and 'toolbox' to allow for tool customization and tool interoperability.

SPECIFICATIONS

LAYOUT CREATION AND EDITING

- Graphical library browser
- Unlimited design hierarchy support
- Multi-window editing supporting on the same or different design data
- User-configurable command entry using bindkeys or graphical strokes
- Pre- and post-selection modes
- User-configurable selection with filtering
- User configurable undo/redo levels
- Create and edit polygons, paths, rectangles, circles, ellipses, donuts, pins, and contacts in layout cellviews
- Comprehensive search and replace features
- Pcell support for changing the size, shape, or contents of each cell instance without changing the original cell
- Customizable tool environment using Cadence SKILL programming language
- World viewer (see *Figure 4*)

- OpenAccess database support
- Diva® and Assura™ physical verification support

DESIGN INPUTS

- Cadence CDBA database
- SKILL
- STREAM format
- OpenAccess database

DESIGN OUTPUTS

- Cadence CDBA database
- SKILL
- STREAM format
- OpenAccess database

PLATFORM/OS

- Sun/Solaris
- HP-UX
- IBM AIX
- Linux

THIRD-PARTY SUPPORT

- SKILL based tools and functions
- OpenAccess tools and functions
- Process Design Kits (Please reference the PDK datasheets for more information)

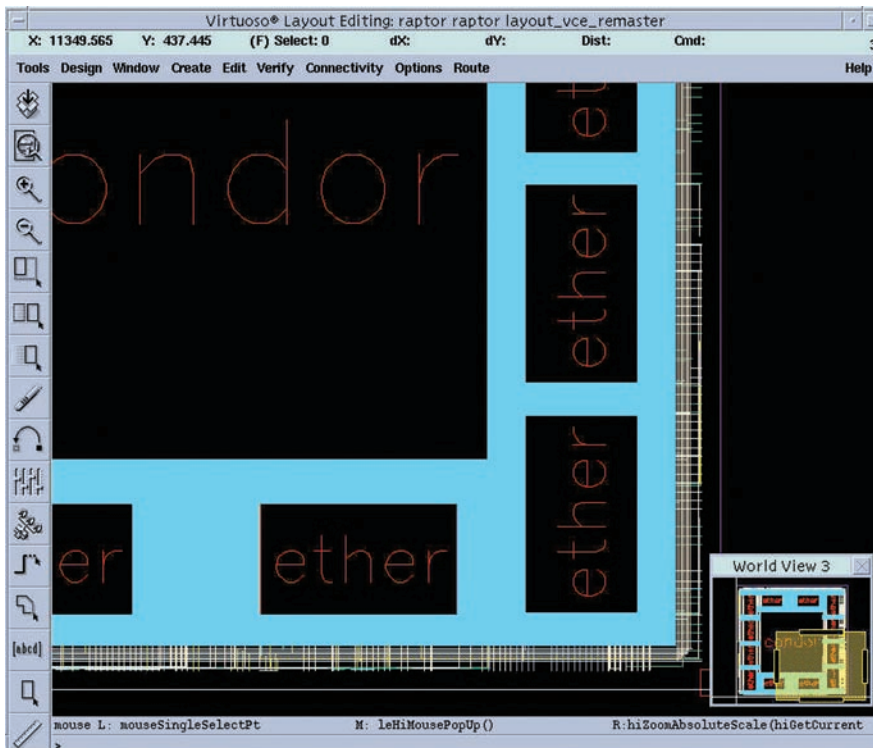


Figure 4: Integrated and intuitive world view design navigation aide

CADENCE SERVICES AND SUPPORT

- Customer-focused solutions that increase ROI, reduce risk, and achieve your design goals faster
 - Collaborative approach and design infrastructure—virtual teaming
 - Proven methodology and flow tuned to your design environment
 - Design and EDA implementation expertise
- Product and flow training to fit your needs and preferred learning style
 - Over 80 instructor-led courses—certified instructors, real world experience
 - More than 25 Internet Learning Series (iLS) online courses
- Cadence customer support that keeps your design team productive
 - Cadence applications engineers provide technical assistance
 - SourceLink® online support gives you access to software updates, technical documentation, and more—24 hours a day, seven days a week

FOR MORE INFORMATION

Email us at info@cadence.com, or log on to www.cadence.com