

Expert: Calibre RVE Interface for DRC/LVS

Introduction

Expert can be used in conjunction with Calibre DRC and LVS verification tools. You can launch verification from within Expert, and then use Expert for highlighting errors. This feature is available only on Linux platform.

1.1 Setup

For setting up Calibre tools, please refer to Mentor Graphics documentation. Expert expects the MGC_HOME environment variable to be set, and pointing to the location where Calibre is installed.

You can also use the environment variable MGC_CALIBRE_LAYOUT_SERVER to specify socket number, which will be used for communication between Expert and Calibre tools. By default, Expert uses socket 9189. If it is not available, Expert tries to open different ports. When Expert successfully opens a socket, it reports the socket number to the log file.

1.2 Calibre DRC

You have two options invoking Calibre DRC: directly from Expert as a batch job, or through Calibre Interactive.

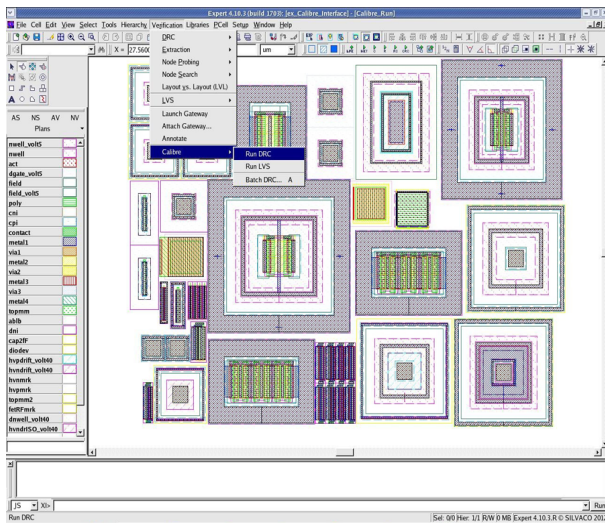


Figure 1. Invoking Calibre Interactive DRC.

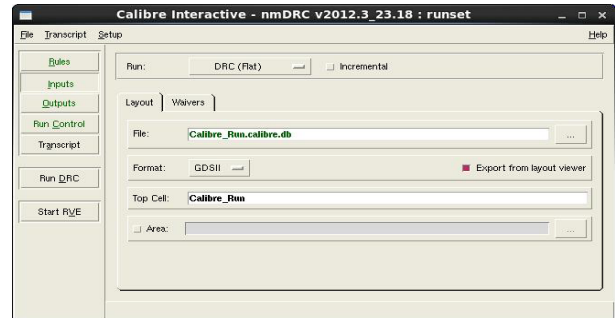


Figure 2. Calibre Interactive nmDRC.

To invoke Calibre DRC as batch job, select the menu command **Verification**→**Calibre**→**Batch DRC**. You will be prompted with the dialog shown in Figure 3.

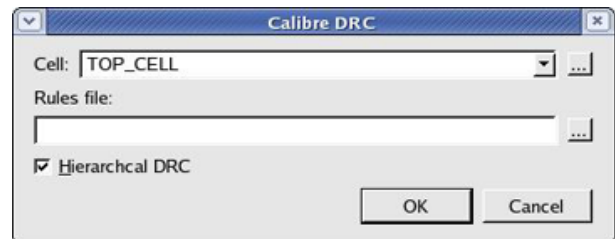


Figure 3. Batch DRC parameters.

This dialog allows you to select a specific cell, and the rules file, and mode (Hierarchical or Flat) that DRC will run. To start verification, enter all parameters and click the **OK** button. When the DRC operation finishes, Expert will automatically load DRC errors. To inspect the errors, Go to **Verification**→**DRC**→**Errors**→**Load Errors** from within Expert Menu.

To run DRC through Calibre Interactive, select the menu command **Verification**→**Calibre**→**Run DRC**. You will be prompted with the Calibre Interactive panel, where you can enter all DRC parameters and start a DRC operation. After DRC finishes, Calibre Interactive will invoke Calibre RVE. Use it to browse DRC errors and highlight them in Expert, as illustrated in Figure 4.

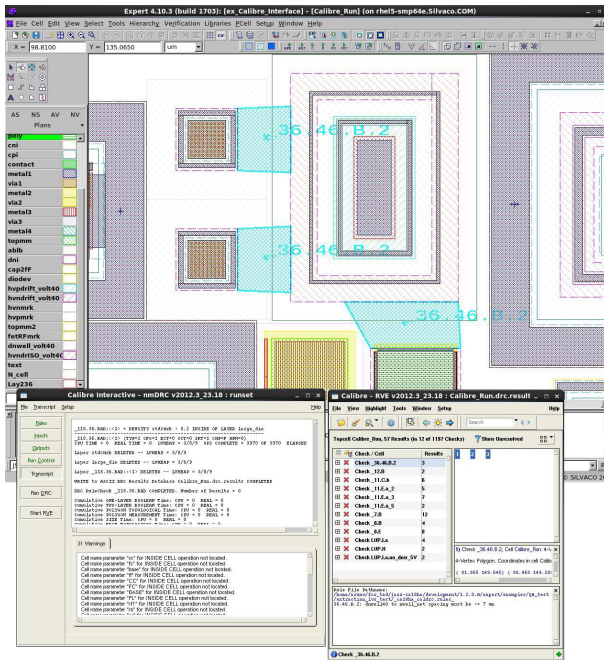


Figure 4. Highlighting DRC Results on Expert Layout Editor from RVE.

1.3 Calibre LVS

To run Calibre LVS verification, select the menu command **Verification**→**Calibre**→**Run LVS**.

Expert will launch Calibre Interactive, where you can enter all LVS parameters and start LVS verification. After LVS finishes, Calibre Interactive will invoke Calibre RVE. Use it to browse LVS errors and highlight corresponding layout geometry.

For more information on using Calibre Interactive and RVE, please refer to Mentor Graphics documentation.

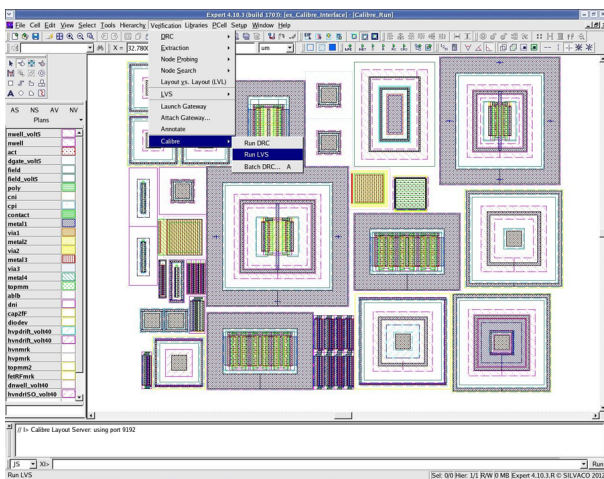


Figure 5. Invoking Calibre LVS.

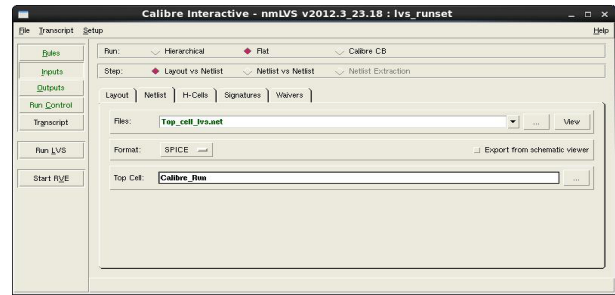


Figure 6. Calibre Interactive nmLVS.

Conclusion

The Expert interface with Calibre Interactive and Calibre RVE enables effective physical verification and cross-probing using industry standard formats, allowing the licenses to be used efficiently.

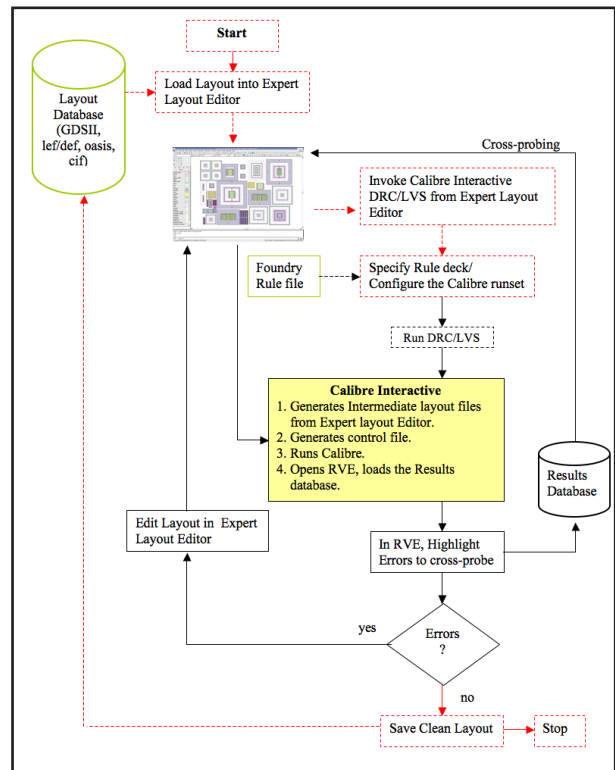


Figure 7. Expert Calibre Interface Flow.