

Pinebush Technologies Introduces HyperX

Data Transformation for DFM Flows

<u>HyperX</u>
HyperX-GDS API
HyperX-Oasis API
GDS-2-Oasis
Oasis-2-GDS
Validate
Add Info
Cell Compare
Cell Replace
Cell Rename
Cell Merge
Layer Merge
Cell Rename
Data Extract
Layer Split

Overview

Developing and managing a tapeout flow can be a long and difficult process. Creating repeatable processes in order to minimize the total tapeout cycle time is one of the most important steps in the design flow.

Pinebush Technologies has long been recognized for its high performance, high capacity, and highly reliable HyperPlot suite of rasterization tools, and now brings that reliability to GDS-II and OASIS file format access.

HyperX is an integrated set of data transformation modules designed to enable the advanced physical design engineer to manage the flow of data in GDSII and Oasis formats. HyperX is designed so that you can seamlessly work in legacy as well as future environments. With HyperX, you are protected from the endless shifts, changes and versions of file formats. HyperX includes core technology, information modules, conversion modules, merge, replace, and data extraction modules.

Pinebush has created a number of HyperX modules ready to integrate into most DFM flows. The modules use core HyperX-GDS and HyperX-Oasis technologies to ensure consistency across products. In addition, Pinebush is making the core access API routines available to customers who want to create their own specific tools.

Features and Benefits

Core Technology

Pinebush Technologies first developed the core HyperX-GDS and HyperX-Oasis building blocks for their own purpose in developing new modules and to ensure that advanced engineers could develop tools dedicated to their purpose. These technology modules also provide the read/write power in Pinebush's well-known HyperPlot rasterization solution.

Conversion and Information

Pinebush not only enables the move-forward from GDSII to OASIS, but also has created OASIS to GDSII. Pinebush has been in the EDA market for over 20 years, and recognizes that not all software tools and equipment will support OASIS immediately, if ever. Therefore, Pinebush helps safeguard the legacy investment in GDSII data by providing forward and backward conversion methods.

The HyperX Validation module ensures that the OASIS data, wherever it came from, is in fact valid OASIS according to the Sematech standard specification. In addition to pure validation, the module can optionally create numerous statistics about the OASIS file, useful throughout the tapeout flow.

The HyperX Add Information module enables you to time stamp or otherwise document any changes as data moves through the flows. This module ensures traceability of changes to the IC layout data.

HyperX Cell Compare is a powerful, unique module to check changes to an OASIS file. Cell compare does a geometry to geometry and instance to instance data comparison between two files. This module is similar to a geometrical XOR comparison, but is more rigorous by checking for exact data matches.

Replace and Merge

HyperX Cell Replace enables the physical design engineer to substitute a new layout into an OASIS file. This feature is extraordinarily useful for last minute changes to a specific layout block.

HyperX Cell Merge comes in two varieties. The first and more simple merge enables you to merge two files together. The second, more advanced merge, enables a more intelligent merge of multiple OASIS files along with the ability to create a new high level block based on cells coming from the several OASIS files.

Layer Merge lets you combine layers from two OASIS files. The resulting cells will have all input layers combined.

The HyperX Cell Rename module allows you to either rename a specific cell or to rename all cells with a given suffix or prefix.

Extraction

HyperX data extract modules include two components, Layer Extract and Cell Extract. You can pull out specific layers or all except specific layers. Cell extract lets you pull out a single cell and its hierarchy.

The Layer Split module is a unique module built for the tapeout engineer. With a single command, you can separate all layers into multiple new OASIS files with only the individual layers in each file.

Availability, Packaging, and Operating Systems

HyperX is licensed as a series of modules and is available per-module or as a single bundle. The core technology modules, HyperX-GDS and HyperX-Oasis APIs are available separately and not included in the total packaged bundle. HyperX is now available in beta release. HyperX runs on Solaris and Linux, both 32- and 64-bit platforms.

About Pinebush Technologies, Inc.

PINEBUSH Technologies, Inc., located in Albany, NY, is a worldwide leading developer and supplier of high performance visualization and analysis software for semiconductor (EDA), IC, CAD, GIS, A/E/C, engineering, mapping, scientific, and other technical applications. Pinebush Technologies' products are distributed exclusively by The Shearwater Group, Inc.

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