



# Pinebush Technologies HyperX™

## Multi-Tiered EDA Data Access and Transformation

### Overview

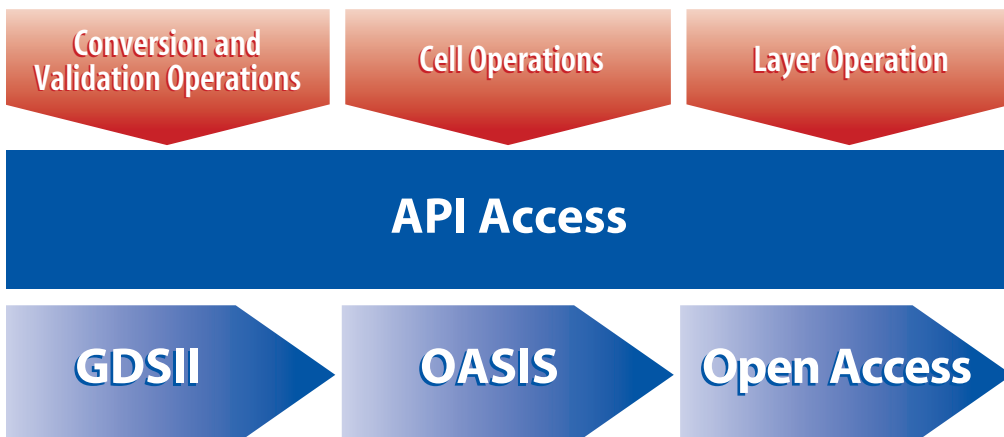
Developing and managing a tapeout flow can be a long and difficult process. Creating repeatable processes in order to minimize the total tapeout cycle time is one of the most important steps in the design flow.

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 formats and (coming soon) the Open Access database.

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, Oasis, and Open Access 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 physical design flows. The modules use consistent APIs to ensure stability across products. In addition, Pinebush is making the API routines available to customers who want to create their own custom applications.

## Multi-Tiered EDA Data Access and Transformation



- HyperX
- HyperX-GDS API
- HyperX-Oasis API
- GDS-2-Oasis
- Oasis-2-GDS
- Validate
- Cell Replace
- Cell Rename
- Cell Merge
- Layer Merge
- Cell Rename
- Data Extract
- Layer Split



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## Features and Benefits

### Core Technology

Pinebush Technologies first developed the core API 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, Validation, 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.

### Cell Operations

HyperX includes functionality for replacing and merging specific cells or all cells. HyperX includes intelligent collision management in the case of same named cells. Inversely, the engineer can extract specific cells.

The cell operations enable the physical design engineer to substitute a new block into a layout file. This feature is extraordinarily useful for last minute changes to a specific layout block.

## Availability, Packaging, and Operating Systems

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### **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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