

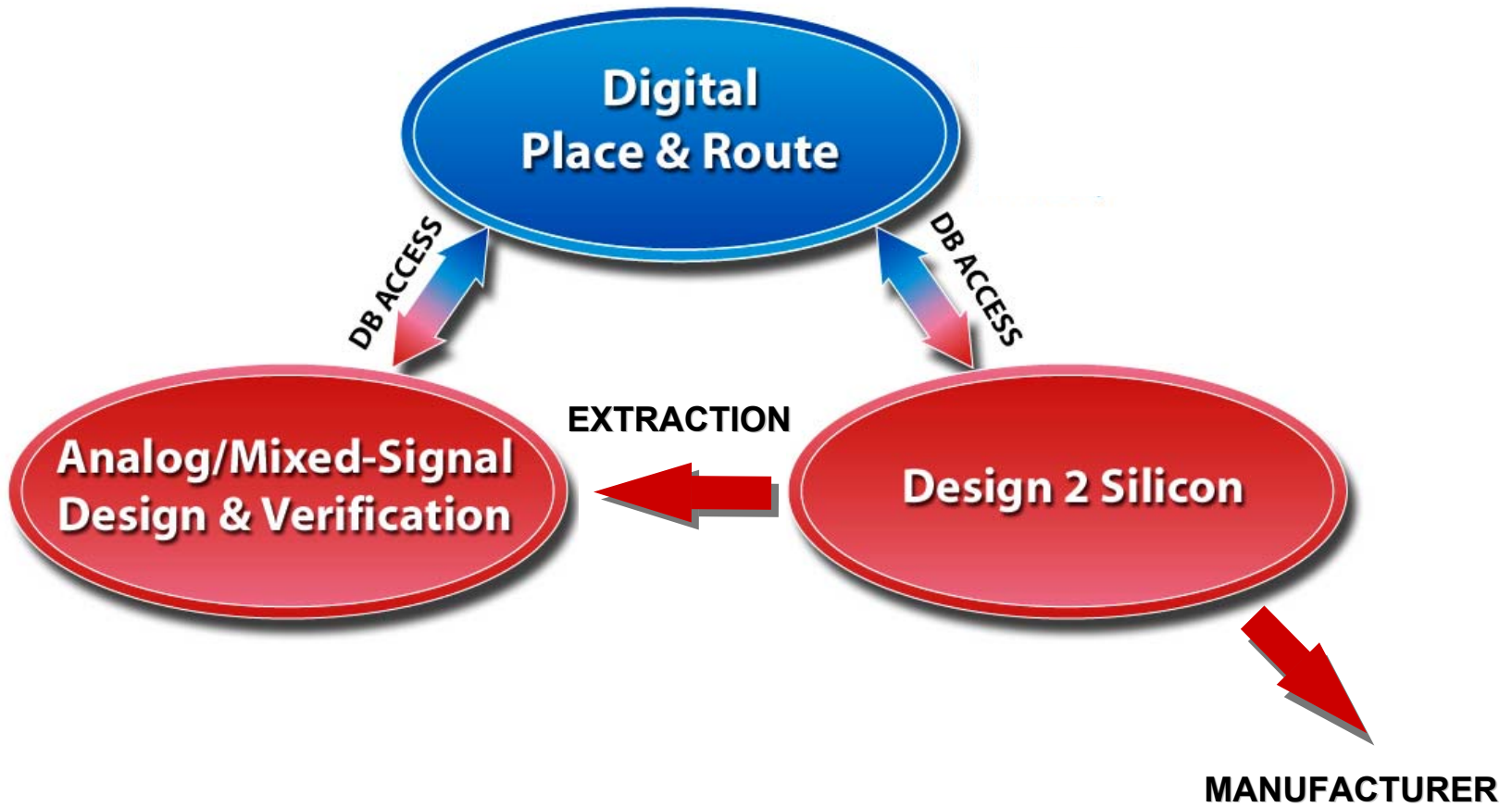
Calibre Milkyway Integration

An Example of Interoperability

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**Mentor
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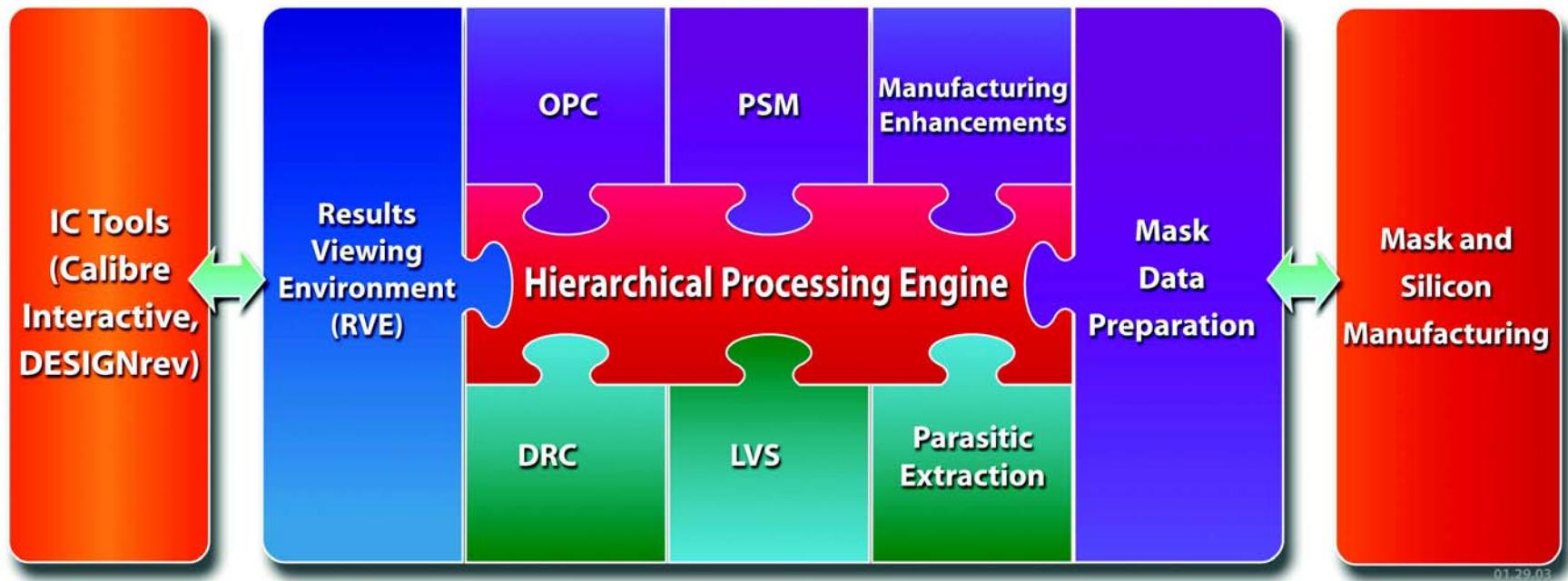
IC Tool Platforms



Benefits of Interoperability

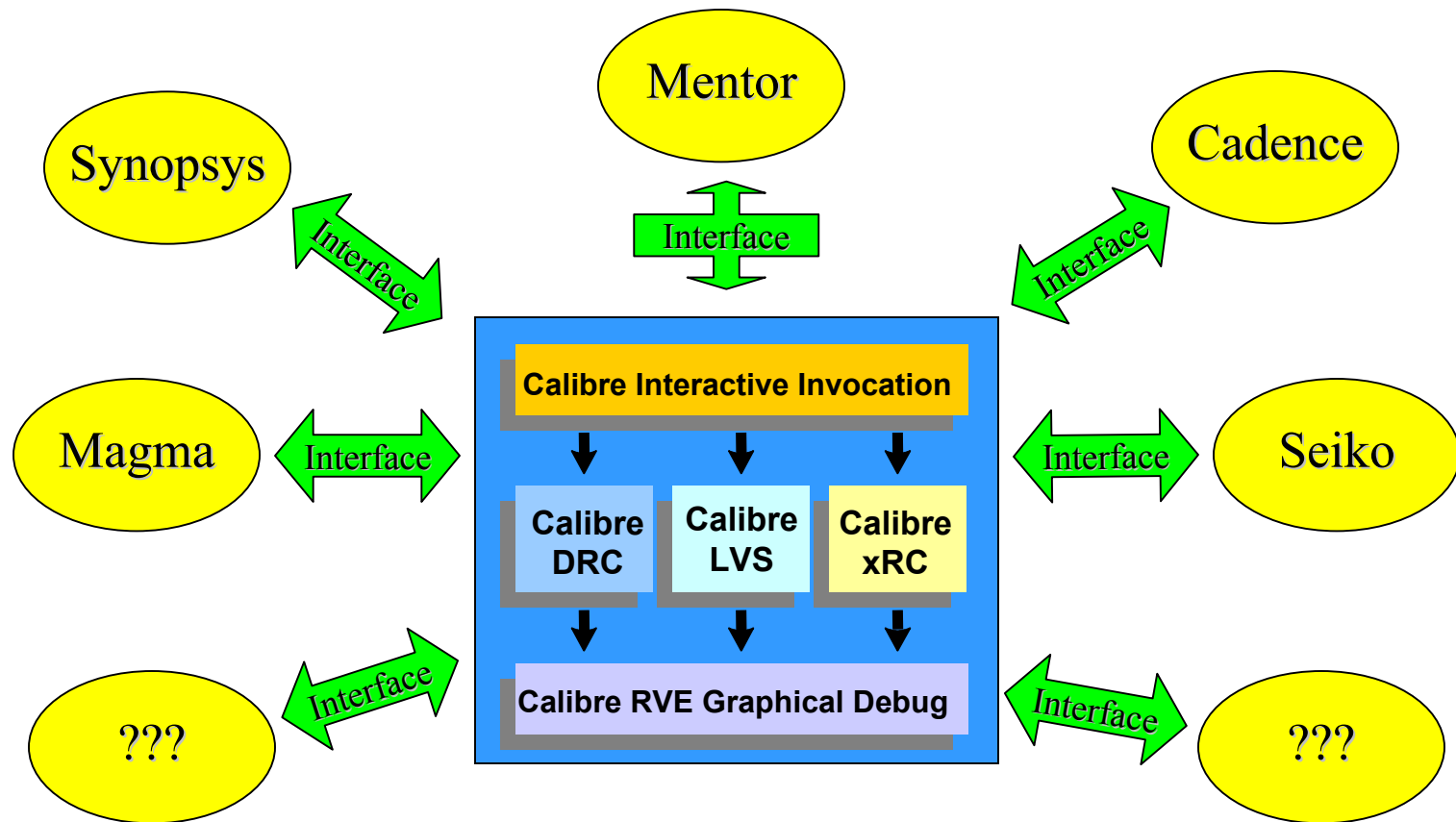
- **Increased Customer Choice**
 - **Not Confined to One Tool Suite**
- **Flexible Methodologies**
 - **User Decides Best-in-Class Tools**
 - **Additional Capabilities**
- **Streamlined Multi-vendor Flows**
 - **Implementation, Maintenance, ...**
- **Vendor Supported Integration**

Calibre Design-to-Silicon Platform



Universal Integration Approach

- Integrates With Many Different Design Environments
- Only the Interface Module Needs to Change



Milkyway Integration: How It Works

The image displays the Calibre DRC RVE (Design Rule Check and Release) interface. The main window, titled "Calibre - DRC RVE : DIGBLK.drc.results", shows a hierarchical error report for cell DIGBLK. The report indicates 7 errors in 4 of 55 checks:

- Cell DIGBLK - 7 Errors
 - Check PDIF_OVERLAP_POLY - 3 Errors
 - 01 02 03
 - Check CONTACT_SPACE_TO_POLY - 1 Error
 - 01
 - Check METAL1_SPACE - 1 Error
 - 01
 - Check METAL2_SPACE - 0 Errors

The "Checktext" window provides details for the "Check METAL1_SPACE" error, showing the rule file path and the minimum metal 1 space value: "Rule File Pathname: ... Min Metal 1 space = 0.25".

The layout view shows a top-down view of the cell DIGBLK, with a 4-vertex polygon highlighted. The polygon's vertices are listed in the "Cell Top" panel:

X	Y
572.402	143.47
573.648	143.47
573.55	143.7
572.5	143.7

The interface also includes a "Calibre Interactive - DRC : [DIGBLK]" window with various setup options and a "demo" window with a menu and toolbars.

Benefits of Integration

- **Push button access to Calibre**
 - DRC, LVS, xRC

- **Shorter iteration time**
 - Direct invocation from design environment
 - Rapid verification & parasitic extraction
 - Easy location of results in design environment
 - Faster repair of errors & discrepancies
 - Parasitic visualization

- **Shorter time to tape-out**

Integration Roadmap

H1 '03

H2 '03

DRC Invocation

PEX Invocation

LVS Invocation

Parasitic Visualization

DRC results Highlighting

Export objects to layout

LVS Crossprobing

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