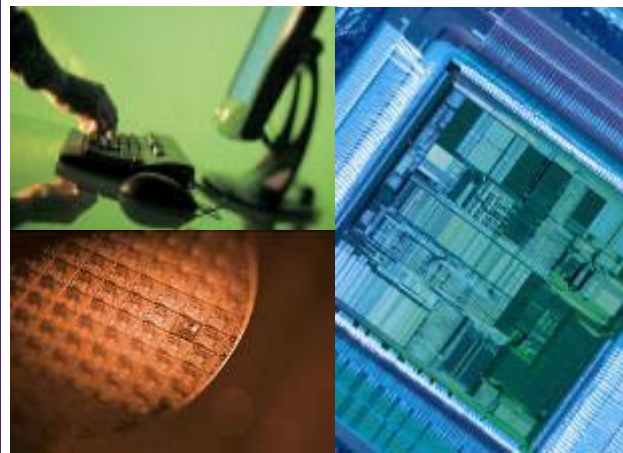


Synopsys MAP-inSM Program Update

EDA Interoperability Developers' Forum
November 9, 2006



Laurence Brevard
SMD Alliance Manager

Agenda

- Milkyway and Galaxy Design Platform overview
- MAP-in program overview
- MAP-in releases
 - 2004.06 and 2005.09
 - 2006.06 – became available September 12
 - 2007.03 – coming ~June 2007
- Call for Input on 2007.03 release

Milkyway™

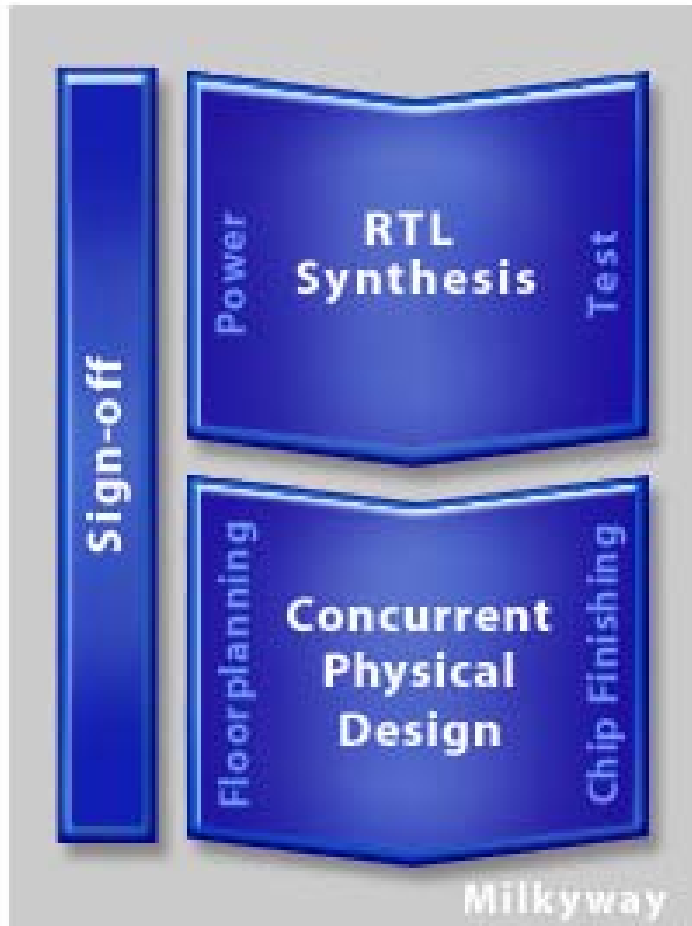
Key Features and Benefits

<http://www.synopsys.com/products/milkyway/milkyway.html>

- Production-proven database for all Galaxy Design Platform tools
- Capacity that supports the largest designs
- Eliminates the need for large design exchange files
- Includes physical library preparation
- Supports designs in the latest technologies including 90, 65, and 45nm
- Precludes design intent mismatches from faulty semantics of exchange files
- Open to 3rd-parties (C-API, Tcl, Scheme) through the free MAP-in program
- Also provides 3rd-party data input to the Galaxy Platform through LEF and DEF

Galaxy Design Platform

http://www.synopsys.com/products/solutions/galaxy_platform.html



- Production proven down to 65nm
- Optimal trade-offs between speed, area, power, test and yield.
- Industry standard sign-off timing and extraction
- Unmatched 3rd party support for technology libraries, services and IP.
- Provides fastest path to the best results

MAP-inSM – Milkyway Access Program

- **Free and open to all EDA vendors**
 - 40+ licensees with recent bursts of activity
 - Products available today
- **Comprehensive environment**
 - GUI, viewer, editor, translators
 - Scheme and TCL scripting
 - Fast C-API access to read, modify, and/or create
- **One Milkyway code-base**
 - Simultaneous releases
 - Forward and backward compatibility

MAP-in Membership

- **Basic Membership Requirements**

- Commercial software tool vendor that needs access to Milkyway-based data
- Agree to MAP-in license

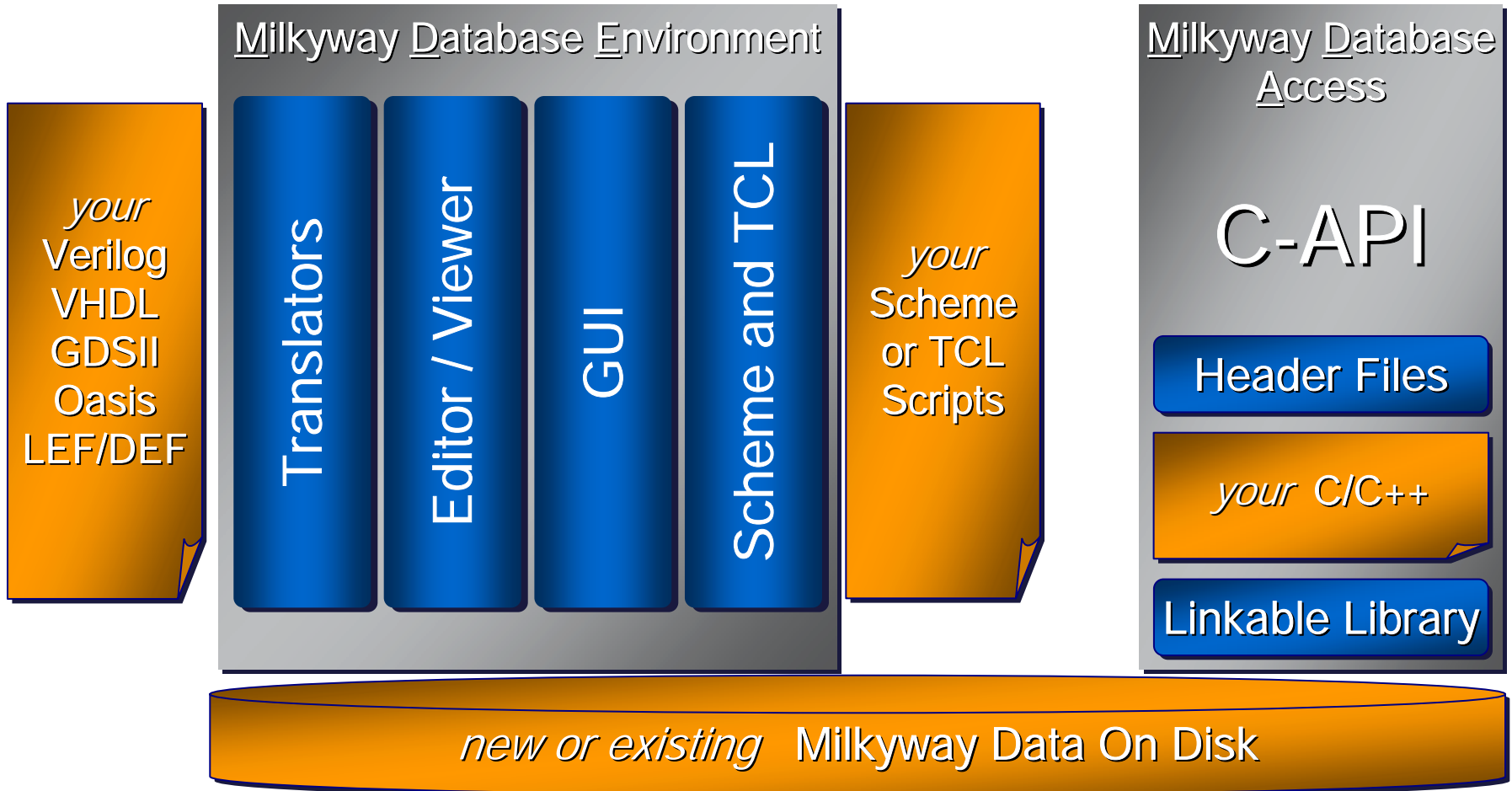
- **No Membership Fee**

- 1st copy of Milkyway Database Environment (MDE) and Milkyway Database Access C-API at no charge.
 - Additional copies of software available for modest annual fee
- Access to SURF on available/approved basis
- MAP-in web forum for community support

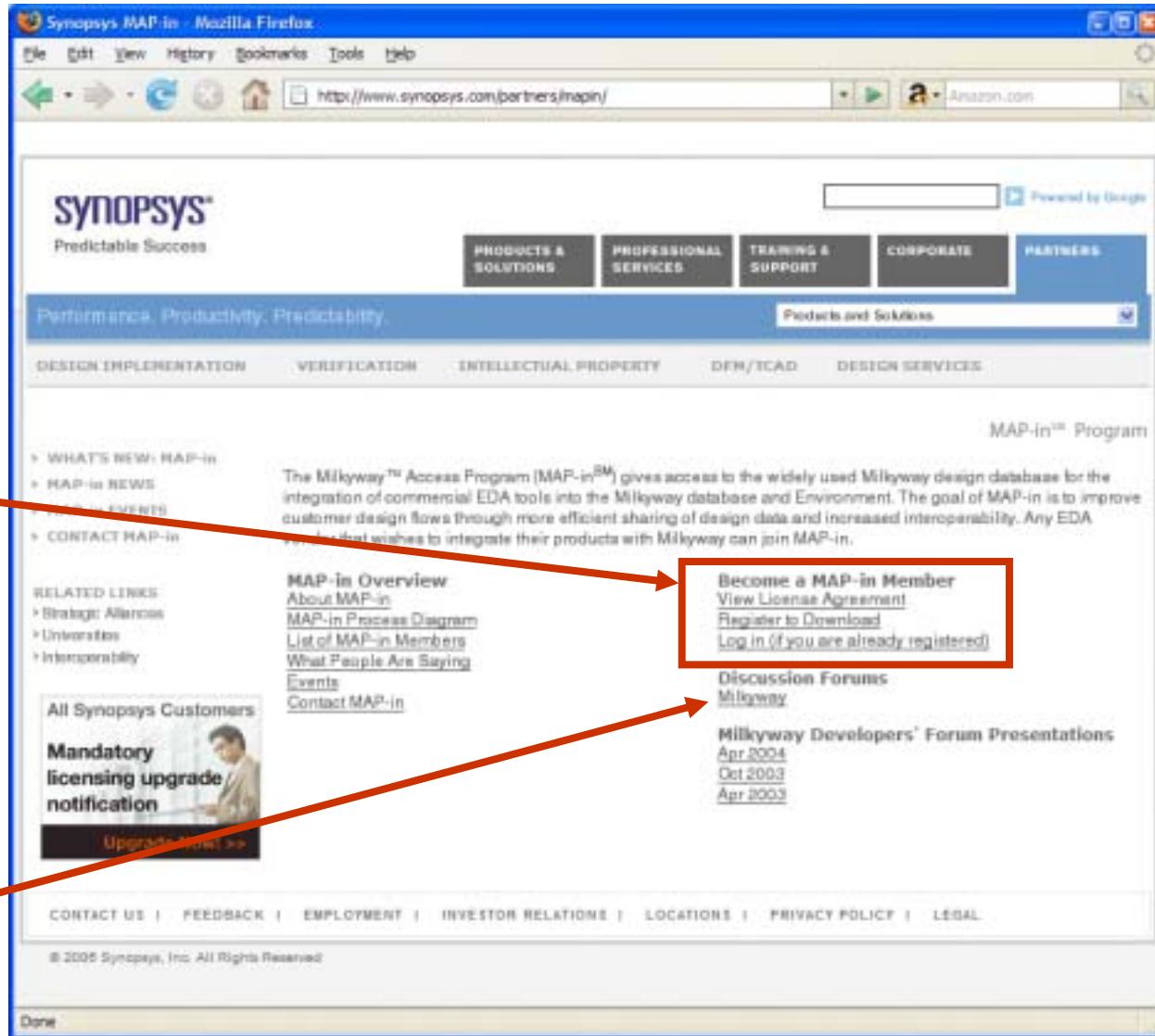
- **Synopsys offers optional support contract**

MAP-in Components

Documentation and Examples



Web Based MAP-in Access



- MAP-in program web site:

www.synopsys.com/partners/mapin

- Program information

- Simple click-through membership registration

- immediate access to MDE
- request form for MDA C-API

- Access to discussion forums

Web Based MAP-in Access – Login

The image shows a screenshot of the Synopsys MAP-in Login page in Mozilla Firefox. The browser address bar shows the URL <http://www.synopsys.com/cgi-bin/mapin/display1.cgi>. The page features the Synopsys logo and navigation menus for Products & Solutions, Professional Services, Training & Support, Corporate, and Partners. The main content area is titled "MAP-in Login" and includes a "Login Information" section with fields for "Username" (containing "mapin") and "Password" (masked with asterisks), and a "Log In" button. Below the login form, there is a "Welcome Administrator!" message and links to reports: "Combined Log Files Summary Report with Counts", "Registered Users Report", and "Download Attempt Usage Report". The footer contains navigation links: "CONTACT US | FEEDBACK | EMPLOYMENT | INVESTOR RELATIONS | LOCATIONS | PRIVACY POLICY | LEGAL".

Download Page

Synopsys MAP-in Product Selection - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.synopsys.com/cgi-bin/mapin/display2.cgi?group=MAP-in&userid= Amazon.com

SYNOPSYS
Predictable Success

PRODUCTS & SOLUTIONS PROFESSIONAL SERVICES TRAINING & SUPPORT CORPORATE PARTNERS

Performance. Productivity. Predictability. Products and Solutions

DESIGN IMPLEMENTATION VERIFICATION INTELLECTUAL PROPERTY DFM/TCAD DESIGN SERVICES

MAP-in™ Program

WHAT'S NEW: MAP-in
MAP-in NEWS
MAP-in EVENTS
CONTACT MAP-in

MAP-in Product Selection

Comments? Email your comments about Synopsys documentation to doc@synopsys.com

Select a Product to Download

The Milkyway Database Environment (MDE) is the full Milkyway runtime environment which includes the GUI, Scheme and Tcl scripting environment, a basic editor and the file translators for Verilog, VHDL, LEF/DEF, GDSII and PDEF.

Synopsys Installer:
The Y-2006.06 MDE release is packaged to use the Synopsys Installer.

[Download Synopsys Installer](#)

MDE Documentation:

- [Installation Guide Version Y-2006.06](#)
- [MDE Readme Version Y-2006.06](#)
- [MDE MAP-in Extension Language Manual Version Y-2006.06](#)
- [MDE MAP-in Data Preparation User Guide Version Y-2006.06](#)

Done

- Installer
- Documentation

Download Page *cont'd*

- Milkyway Database Environment (MDE)

- Current version
- Previous versions

- Milkyway C-API (MDA)

- Reference manual
- Download request

- License key request

Synopsys MAP-in Product Selection - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.synopsys.com/cgi-bin/mapin/display2.cgi?group=MAP-in&userid= Amazon.com

MDE Common Code Needed for All Platforms:

- MDE Common Files Version Y-2006.06 Platform Independent (15 MB)
- MDE Platform Specific Binary Code:**
- MDE for AMD.64 Version Y-2006.06 Red-Hat Enterprise Linux v3 – 64 bit (45 MB)
- MDE for HP.64 Version Y-2006.06 HP UX 11.0 – 64 bit (87 MB)
- MDE for IA.64 IPF-2 Version Y-2006.06 RedHat Enterprise Linux v2.1 – 64 bit (72 MB)
- MDE for IA.32 x86 Version Y-2006.06 RedHat Enterprise Linux v3 – 32 bit (43 MB)
- MDE for SUN.64 Version Y-2006.06 SUN Solaris 9 – 64 bit (85 MB)
- MDE for SUN.32 Version Y-2006.06 SUN Solaris 9 – 32 bit (49 MB)
- MDE for SUSE.32 Intel EM64T 32-bit Version Y-2006.06 SUSE Linux Enterprise Server 9 – 32 bit (36 MB)
- MDE for SUSE.64 Intel EM64T 64-bit Version Y-2006.06 SUSE Linux Enterprise Server 9 – 64 bit (40 MB)

Archived Versions

Milkyway Database Access C-API Standalone Libraries
The Milkyway Database Access (MDA) C-API Standalone libraries include the linkable runtime object code and the source header files with the C-API function signatures and definitions. This does not include a GUI, interpretive environment, editor or file translators.

MDA MAP-in C-API Reference Manual for Version Y-2006.06

Request C-API Libraries Download Instructions
Synopsys will process your request and upon approval send you instructions on how to download the Milkyway Database Access C-API Standalone libraries within three business days.

Click the button below to request download instructions.

License Key Request
To get started right away, register to receive a Milkyway license key. Synopsys will process your request and upon approval send you one 60-day license within three business days. The MAP-in administrator will follow up with your one year license within the 60-day period.

Click the button below to submit a request for a license key.

2004.06 Release Highlights

- **Platform QSC-V**
 - Added RHEL v3 on AMD.64
 - IA.32 was still Red Hat Linux 7.2
- **MDE (GUI, Editor, Scripting, Translators)**
 - Added TCL /CCI scripting language in addition to Scheme
 - New Translators
 - LEF 'read_lef' w/ direct creation of Milkyway database
 - OASIS
- **MDA (C-API)**
 - 50 functions added to C-API
 - Driven by MAP-in partner and customer requests
 - Additional data management
 - Additional design editing functions

2005.09 MAP-in Release – PREVIOUS

- **Moved to tighter synchronization with product releases**
- **Based on 2005.09 Astro Product Family**
- **Available as of December 2005**

2005.09 MAP-in – MDE

- **Milkyway Database Environment**

- GUI, layout editor, scripting, menu development
- Translators: VHDL, Verilog, LEF*/DEF, GDSII, Oasis, PDEF

- **Updates – see readme.pdf documentation**

- Scripting: Tcl collections, display control, command shell w/o GUI, new nullDisplay
- Translators: Verilog 2001, DEF support, Oasis, PDEF
- Database control: locking, hierarchical archive
- Attached file management

2005.09 MAP-in – MDA

- **Milkyway Database Access - C-API**
 - Header files and linkable library
 - Milkyway database access for user-written programs
- **Updates**
 - New C-API functions
 - Support for hierarchical netlist

2005.09 MAP-in – Documentation

- HTML documentation no longer available for MAP-in
- One consistent set of navigable PDF
 - Better match to the specific MAP-in capabilities

2005.09 MAP-in Release – Issues

- **X Window System stubs**
 - Separate version of MDA is available
 - General technique for stripping stubs developed
- **C++ throw / catch on IA.32**
- **Attached file conversion of symbolic links to file copies**
 - STAR filed
 - Fixed for 2006.06

2006.06 MAP-in Release – CURRENT

- Synchronized with 2006.06 Astro Product Family
- Became available September 12, 2006
- Bugs fixed:
 - X Window System stubs collision
 - Attached file link to copy conversion
 - AMD.64 version of libMDA.a now linkable into .so
- Open issue:
 - IA.32 and SUSE.32 throw/catch in C++

2007.03 MAP-in Release – **COMING**

- **Synchronized with 2007.03 Astro Product Family**
- **Available ~ June 2007**
- **Specific contents still being decided**
 - ☞ *Give us your input!*

MAP-in Enhancement Requests

- **Additional Access**
 - VarRoute rules
 - Set RouteType
 - CellRow data
 - BaseArray data
 - FatTbl data
- **System Issues**
 - Close Milkyway function
 - Cleanup of link editor warnings about mktemp
- **Please respond on MAP-in forum or to mapin@synopsys.com**

MAP-in Platform Change Highlights

http://www.synopsys.com/products/sw_platform.html

- **2004.06 – QSC-V**
 - IA.32 still RH 7
- **2005.09 – QSC-X**
 - Only Enterprise Linux supported with SUSE added
 - Solaris 9 added as binary compatible
- **2006.06 – QSC-Y – current release**
 - Solaris 9 as base with 10 binary compatible
 - RHEL v4 added as binary compatible
- **2007.03 – QSC-Z – coming next June**
 - HP-UX discontinued

2005.09 MAP-in Platforms – PREVIOUS

QSC-X

- IA.32
 - Red Hat EL v3 x86 32-bit
- AMD.64
 - Red Hat EL v3 x86_64 (AMD Opteron, Intel EM64T)
- SUSE.32, SUSE.64
 - SLES 9 x86_64 (Intel EM64T, AMD Opteron)
- SUN.32, SUN.64
 - Solaris 8/9 Sparc
- HP.64
 - HP-UX PA-RISC
- IA.64
 - Red Hat EL v2.1 Intel Itanium 2 / IPF-2

2006.06 MAP-in Platforms – CURRENT

QSC-Y

- IA.32
 - Red Hat EL v3/v4 x86 32-bit
- AMD.64
 - Red Hat EL v3/v4 x86_64 64-bit
- SUSE.32, SUSE.64
 - SLES 9 x86_64 32-bit and 64-bit
- SUN.32, SUN.64
 - Solaris 9/10 Sparc 32-bit and 64-bit
- HP.64
 - HP-UX 10/11.11 PA-RISC 64-bit
- IA.64
 - Red Hat EL v2.1 Itanium-2 64-bit

2007.03 MAP-in Platforms – COMING

QSC-Z

- IA.32
 - Red Hat EL v3/v4 x86 32-bit
- AMD.64
 - Red Hat EL v3/v4 x86_64 64-bit
- SUSE.32, SUSE.64
 - SLES 9 x86_64 32-bit and 64-bit
- SUN.32, SUN.64
 - Solaris 9/10 Sparc 32-bit and 64-bit
- HP.64
 - **GONE!**
- IA.64
 - Red Hat EL v2.1 Itanium-2 64-bit

MAP-in 11/06

SYNOPSYS[®]
MAP-inSM Program



Lizotech



Nanovata



SYNOPSYS[®]
Predictable Success

Summary

- MAP-in provides free access to Milkyway for all EDA vendors
- Milkyway C-API offers high-performance access to large amounts of existing physical design data
- MAP-in enables the bridge to OpenAccess
- Synopsys continues to be the interoperability leader

SYNOPSYS[®]

Predictable Success