

# MAP-in R&D Update

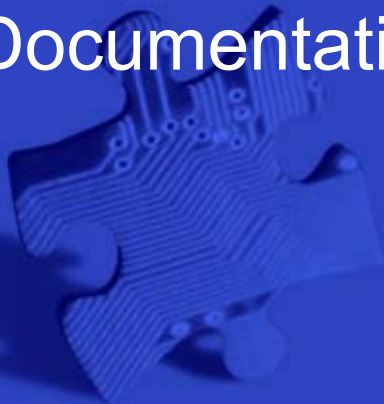
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# The State of Milkyway

- Capacity Improvement
  - Larger Jobs on 32 Bit machine
- External Interface Improvement
  - LEF/DEF 5.5
- More and more tools on Milkyway
  - SNPS and 3<sup>rd</sup> party tools
- Documentation Improvement



# New Features in 2004.06

- The API
  - Iterators
  - Schematic View
  - Data Management support
  
- The Environment – MDE
  - Library preparation
  - External interface
  - Tcl/scheme

# New Features -- API

## ■ Iterators

- To access database objects one by one
- Benefit:
  - Memory saving,
  - Efficiency, if not all objects needed
- To start, get next and to end the iteration
  - Memory may accumulate, if not terminated properly
- Iterate By Object Type
  - The types: MWX\_CELLINST  
MWX\_NET  
MWX\_PORT  
...
- Iterate By Relationship
  - From port to pin
  - From net to wire



## Example - iterator

- Iterate By Object Type
  - MWX\_Iter\_ObjectByType()
  - MWX\_Iter\_Next()
  - MWX\_Iter\_Quit()
- Iterate By Relationship
  - MWX\_Iter\_PortToPin()
  - MWX\_Iter\_NetToWiring()

# New Features (cont.)

- Data Management
  - Provide links with DM tools
    - Handle cell and library than internal objects
  
- Schematic View
  - Schematic Data Accessing
    - New Object Types:
      - Bundle, Segment, Junctions, arc, ...
    - Data Creation and Retrieval
    - 200+ API Available



# Example – Schematic API

- Schematic API

- MWXDb\_Create\_SchArc()

- MWXDb\_Create\_SchCellInst()

- MWXDb\_Create\_SchGlobalNet()

- ...

- MWXDb\_Get\_SchGlobalNet\_symbolSheet()

- MWXDB\_Get\_SchPin\_bbox()

- ...



# New Features -- MDE

- Baseline 2004.06 MAP-in Release
  - Code base on Milkyway 2004.06
  - Library Preparation
    - EoU
    - Prevent user error, catch problem early
  - New LEF/DEF interface
    - 5.5 support
  - Tcl/Scheme dual command language support
    - Scheme Compatibility
    - New SNPS style Tcl commands

# 2004.06 Platform Support

- Qualified System Configuration
  - SUN 32/64 ---- Solaris 8
    - Compiler: SUN Studio One Version 7
  - HP 32/64 ---- HP-UX 11.0
    - Compiler: AR1201; B 11.11.04
  - IA.32 – Red Hat 7.2, Red Hat Enterprise 3.0
    - Compiler: gcc 3.2.2
    - glibc 2.2.4
  - IPF2.64 Red Hat Enterprise 2.1
    - Compiler: gcc 2.96
    - glibc 2.2 4
  - Opteron.64 Red Hat Enterprise 3.0
    - Compiler: gcc 3.2.3
  - Tcl/Tk 8.3.4

# Plan for Future Release

- Qualified System Configuration
  - SUN 32/64 ---- Solaris 8
    - Compiler: SUN Studio One **Version 8**
  - HP 32/64 ---- HP-UX 11.0
    - Compiler: AR1201; **B 11.11.08**
  - IA.32 –**Red Hat Enterprise 3.0**
    - Compiler: **gcc 3.3.2**
  - IPF2.64 Red Hat Enterprise 2.1
    - Compiler: **gcc 3.3.2**
  - Opteron.64 Red Hat Enterprise 3.0
    - Compiler: **gcc 3.3.2**
  - Tcl/Tk 8.3.4

# QSC and Supported Platform

Release	2003.09	2004.06	2004.12
Sun 32/64 (Solaris 8)	Y	Y	Y
HP 32 (HP-UX 11.0)	Y	Y	Y
HP 64 (HP-UX 11.0)	Y	Y	Y
Linux 32 (RedHat 7.2)	Y	Y	N (EOL)
Linux 32 (RHEL v3.0)	N	Y	Y
IPF 64 (Linux 7.2)	Y	N	N
IPF 64 (RHEL 2.1)	Y	Y	Y
Opteron (RHEL v3.0)	Y(1)	Y	Y



## Q & A

- Thank You!

