m Platform Assembly

to create and manage designs (with power management and I/O)

Description

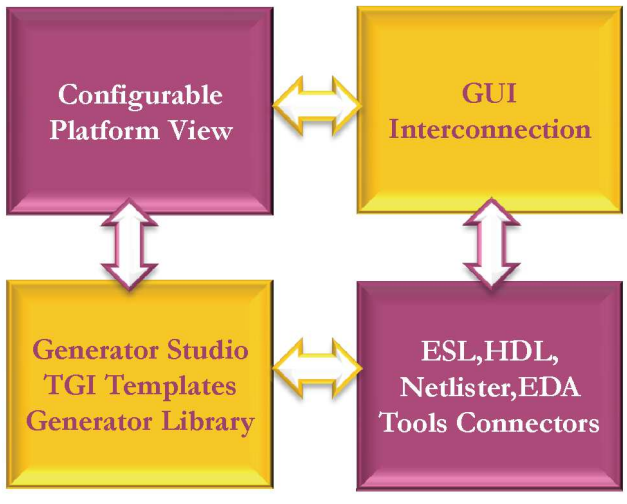
To accelerate the design of complex systems, such as System-on-Chip (SoC), and FPGA based solutions, ESL virtual platform, the IP-XACT standard provides a mechanism for describing and handling multi-sourced IP that enables automated design integration and configuration within multi-vendor tool flows.

To achieve these goals, Magillem presents MPA as the center piece of a powerful intuitive, Integrated Design Environment. The user friendly interface guides the designer during platform assembly and configuration, and streamlines exploration and implementation of IP-based systems:

- A complete graphical platform editor providing advanced parameterization, reusable methodology and collaborative features
- A digital and/or analog design environment (editor, DRC, library management)
- A set of predefined automated operations to easily connect IP through the hierarchy, handle components (move, merge, flat, insert…) and reduce risks of errors.
- A support of virtual hierarchy allowing the same platform to be hierarchically described according the flow step (power domain, verification, software, team, abstraction level, …).
- A graphical interface to manage the library of generator, plugins for the Magillem Generator Studio and customize the automation of the platform for dedicated applications
- A large range of connectors to EDA tools (Mentor, Cadence, Synopsys, Xilinx, Altera)
- RTL and ESL netlister (VHDL, Verilog, SystemC, VHDL-AMS, Verilog-A, SystemC-AMS)
- Automated generation of an environment used for verification, integrated with a cockpit to control and monitor the Design Under Test, in order to manage the progress.

MPA is well adapted for the V-cycle methodology used by multi-site design teams. Using a top-down approach, it builds a complete view of the system, with all interconnections, ready to export sub-system for refinement. Then in a bottom-up flow, the IP integrator can import and update complex IP bundles into SoC design and is guided through the configuration, implementation, and verification of the IP.

Architecture



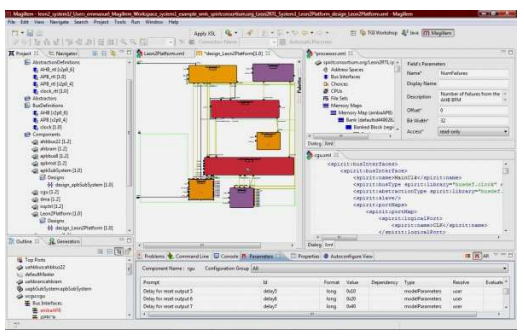
« One Platform, no hassle »

SoC Realization

A correct-by-construction methodology and Design Rule Checkers ensure a high quality of the system and compliance with IP-XACT syntax and semantics. In addition requirements traceability features ensure the correctness with certification in Aeronautics (DO-254).

MPA is the main stakeholder of all Magillem solutions. It can be used as a stand-alone platform for assembling and interconnecting IP or in conjunction with the complete Magillem package to offer a high value and comprehensive solution, MPA performs best in association with MIP to build an IP-XACT library by importing and packaging components, MGS to introduce custom automation to the platform under construction using generators, MRV to manage the software interface (registers and memory) and MSE to develop the hardware related software..

Features



- Digital, Analog, mix and System platform viewer
- Version and configuration management
- Certification requirements traceability
- Verification tool kit
  - Checkbox Interface to connect IP (bus, signal, split, tie)
  - Drag and drop IP into design
  - Various EDA tools connectors
  - RTL and ESL Netlisters
  - Verification tool Kit

Benefits

To the HW System architect Engineer:

- Fast architecture Exploration and definition

To the IP provider:

- Package IP in a reusable format that will guide the IP integrator through the configuration, implementation, and verification

To the IP integrator:

- Heterogeneous architecture integration
- Easy configurable and reusable IP library management
- Auto Generation of ESL/HDL code

To the Project lead:

- Synchronization of collaborative work, verification, tracking, reporting

To the verification Engineer:

- Fast verification of the HW implementation of IP
- Validation plan and coverage scoring
- Easy monitoring, configuration and initialization

© 2014 MAGILLEM S.A. all rights reserved. MAGILLEM and the MAGILLEM logo are registered trademarks of MAGILLEM S.A. All others are properties of their respective holders. MAGILLEM products are subject to continuous development and the Company reserves the right to change, delete, or modify specifications and features without notice. Document Number: V.1.7 MPA Date May 2014

m Platform Assembly

to create and manage designs (with power management and I/O)

Specifications

MPA FEATURES	Premium	Platinum
Native IP-XACT v1.4	X	X
Native IEEE 1685 support	X	X
Component and Design Rules Checker		
Digital Rules	X	X
Analog Rules		X
Support for Custom Rules	X	X
IP-XACT (all versions)+ IEEE1685 Rules Support	X	X
Waiver management on checkers	X	X
Hierarchical Netlister		
Configurable header	X	X
VHDL configuration / VHDL package	X	X
VHDL IEEE 1076	X	X
Verilog IEEE 1364	X	X
SystemC IEEE 1666 with automatic wrapper insertion for VHDL and Verilog		X
VHDL-AMS IEEE 1076.1		X
Verilog-AMS LRM 2.3.1		X
SystemC-AMS LRM 1.0		X
SystemVerilog IEEE 1800		X
Graphical Edition		
System graphical front-end editor	X	X
Analog graphical front-end editor		X
IP browser / IP-XACT editor	X	X
Parameters view (all/filtered)	X	X
Dynamic Hierarchy view	X	X
Component Generator launcher		X
BlockForge editor	X	X

MPA FEATURES	Premium	Platinum
Hierarchy manipulations		
Merge, Flatten, Move operation	X	X
Virtual Hierarchy Management	X	X
Component Stubbing operation	X	X
Publish/update platform		X
Design Statistic reporting	X	X
Hierarchical parameter propagation		X
TCL / Python / Ruby console	X	X
Command line execution	X	X
EDA Tool Connectors		
IC and system simulation		
Modelsim/Questa (Mentor)	X	X
Incisive (Cadence)	X	X
VCS (Synopsys)	X	X
Cadence OpenAccess		X
Legacy design import		
Import VHDL design to IP-XACT	X	X
Import Verilog design to IP-XACT	X	X
DO254 support		X
Supported Operating Systems		
Linux RHE + Windows 2000/XP/Vista/7 (32bit)	X	
Linux RHE + Windows 2000/XP/Vista/7 (64bit)	X	X

Email: contact@magillem.com
Web: www.magillem.com

USA
Magillem
2225 E. Bayshore Road
Palo Alto, CA 94303
Tel: +1 (408) 214 2842

Europe
Magillem
251 rue du Faubourg Saint-Martin
75010 Paris - France
Tel : +33. (0)1.40.21.35.50