

Description

Magillem Generator Studio is a user-friendly and **powerful integrated development environment** to help designers implement, launch and debug their own automation (“*generators*”). A generator will allow to model any complex IP configuration, so that a valid IP-XACT description can be produced, after its configuration, or it may be used to enhanced an ip-xact compliant tool with new features.

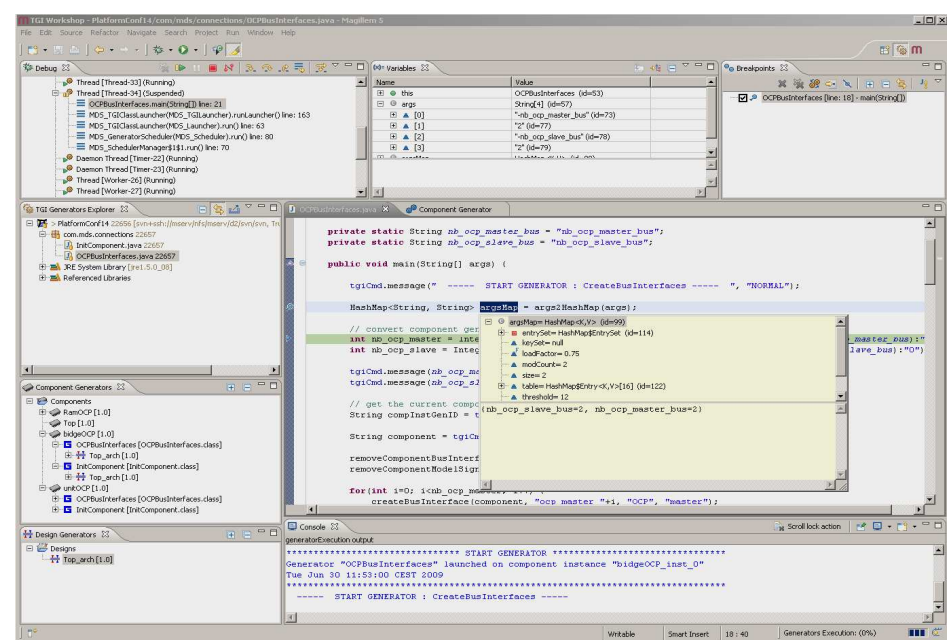
Magillem offers a capability to store IP parameters and files in a structure whereby all facets of an IP can be retrieved easily when building a flow. Use of indexing techniques enables to directly access and modify tool configurations and IP databases through a 100% secure process based on the TGI (*Tight Generator Interface*) defined by the SPIRIT/Acellera Consortium as the **standard API to manipulate any IP-XACT database**. Integrators, IP providers and tool vendors can exchange information and add functionality to the design environment, with their own specific *generators* (i.e. executable objects in IP-XACT terminology).

This mechanism allows customer specific features to be added easily on top of Magillem standard functionalities, without heavy customization or programming.

In addition, TGI generators can be reused in all IP-XACT compliant tools, bringing great benefits in term of cost and tool independence. For example, generators can be implemented to answer the following needs:

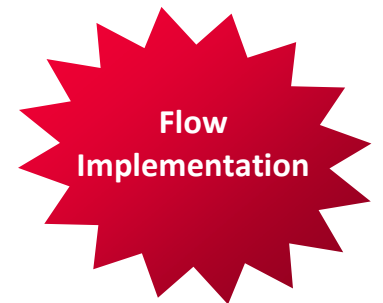
- for an IP provider : configuration of an IP into a system and automatic integration checks
- for a SOC integrator : design Rule checking and sub-system automatic partitioning
- for a flow team : point-tool wrapping of an existing legacy flow for a smooth transition to IP-XACT tools

Moreover, generators can be executed in “command line” mode. Magillem also provides an **extended API**, bringing additional functionality and high level functions to generator developers.



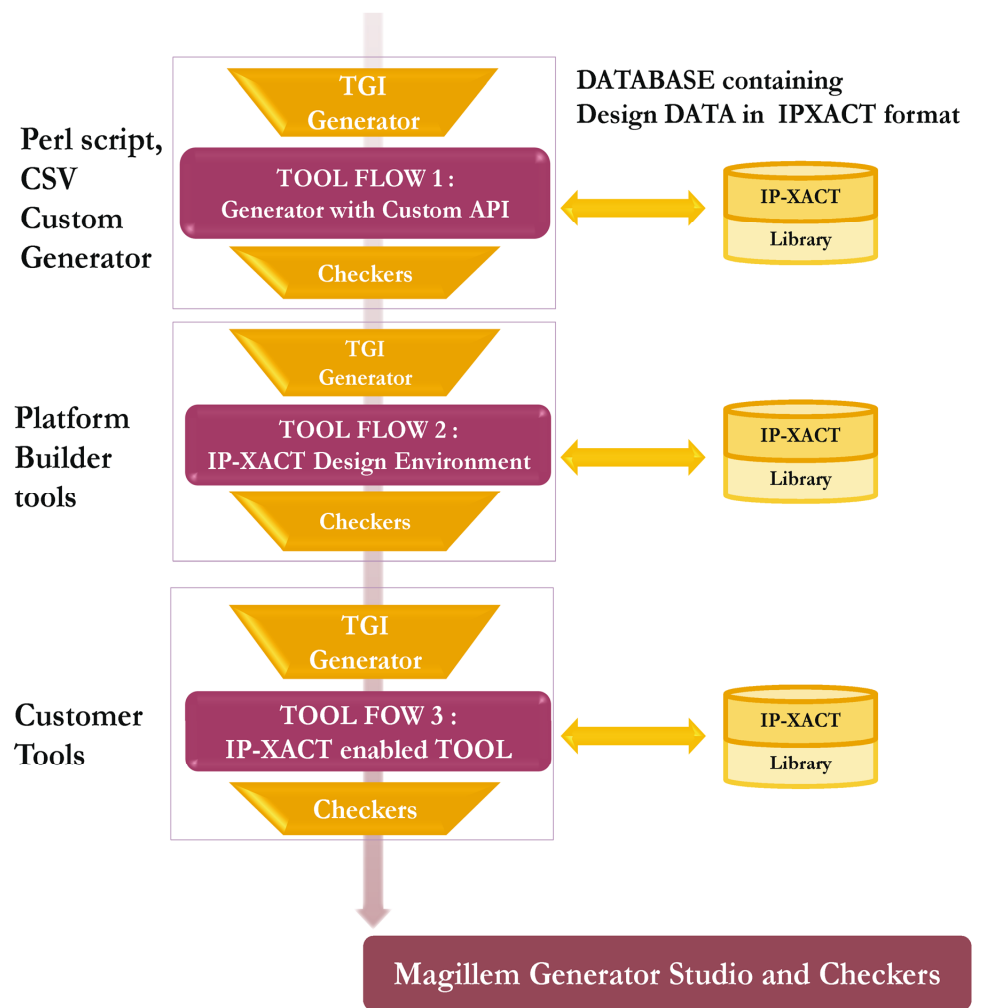
Magillem Generator Studio interface

Features



- Natively Integrated into Magillem Environment
- Ensure 100% error free manipulation of an IP-XACT database
- Java Debugger mode helps developers inspect code, add breakpoints, watch variables and perform many other debug operations
- Generators can be implemented in different languages (Java, TCL, Python, Ruby...)
- Automatic completion, dynamic syntax checking and inline documentation within a user friendly environment
- Used in conjunction with MPA (*Magillem Platform Assembly*) tool, the TGI recorder feature captures operations performed in Magillem schematic editor (instantiate and configure components, create connections...) to automatically create a TGI script.
- TGI-like API provided for all previous versions of IP-XACT (1.0, 1.1, 1.2, 1.4) and support for LGI (Loose Generator Interface, the legacy API)

FLOW defined as a sequence of tools invocation and actions



Benefits:

- Full support of standard TGI API, including support of IEEE1685 and 1.4 standards
- Extended Magillem API provided
- User-friendly environment for generator implementation
- Powerful debugger for Java generators
- Automatic creation of TGI scripts with TGI recorder feature



Specifications

Magillem Generator Studio FEATURES	Premium
IP-XACT 1.0, 1.1, 1.2, 1.4 certified	X
IP-XACT IEEE 1685 certified	X
Execution modes	
Generator development, debug and execution in GUI	X
Generator execution in CLI, TCL and Python console	X
Available APIs	
Standard IP-XACT TGI for IP-XACT 1.4 and IEEE1685	X
Extended Magillem TGI API for IP-XACT 1.0, 1.2, 1.4 and IEEE1685	X
IP-XACT LGI (legacy IP-XACT 1.2 API)	X
High level TGI-LIB set of functions for a higher level of abstraction	X
Access to all TGI function calls from all Magillem tools	X
Supported languages	
Java, TCL, PYTHON, RUBY native support	X
Any language support (with embedded SOAP client in generator)	X
Development environment (JAVA only)	
Complete development environment under Eclipse	X
Keyword and syntax highlighting	X
Context specific (Java, Javadoc) code assistance and help	X
Automatic code formatting and completion	X
Margin annotations for problems, break points, or search matches	X
Import assistant automatically creates and organizes import declarations	X
Inline help and documentation	X
Debug Environment (JAVA only)	
Debugging features native integration (variable watch, breakpoint insertion, step by step execution...)	X
Magillem Environment	
Auto generated IP-XACT generator files	X
Plug and play generator execution within Magillem Platform Assembly	X
Automatic creation of TGI script with TGI recorder (used with Magillem Platform Assembly)	X

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