Mining your own expertise

Magillem Checker Suite

Conformity to IP-XACT/IEEE 1685

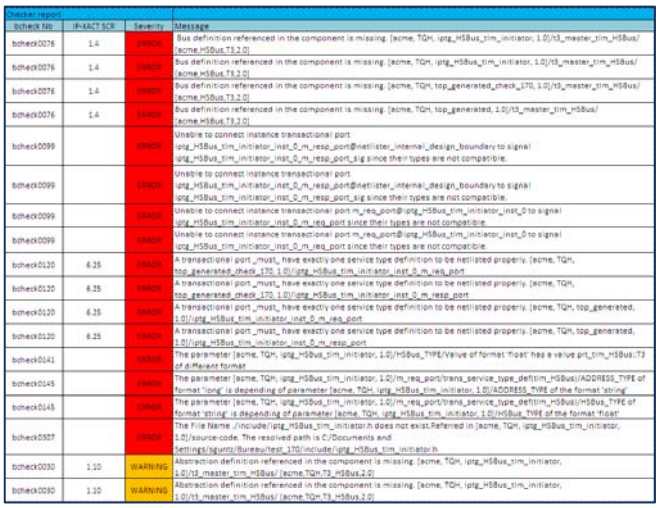
Description

To accelerate the design of complex systems, such as System-on-Chip (SoC), and FPGA based solutions, 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.

The IP-XACT standard delivers a common specification to enable easy exchange and integration of IPs between multiple IP providers and integrators. In particular, it defines a complete set of syntax and semantic rules to ensure that bus, IP and platform descriptions will be compatible and interpreted by compliant tools as expected and defined by their providers.

Magillem Checker Suite is the ultimate compliance suite which enables IP providers, integrators and flow engineers to effectively assess their compliancy to IP-XACT and detect any non standard information early in the design flow. In addition to standard syntax and semantic rules, the suite delivers further DRC and integration checks to verify the correctness of a platform or IP. Magillem Checker Suite advantages are:

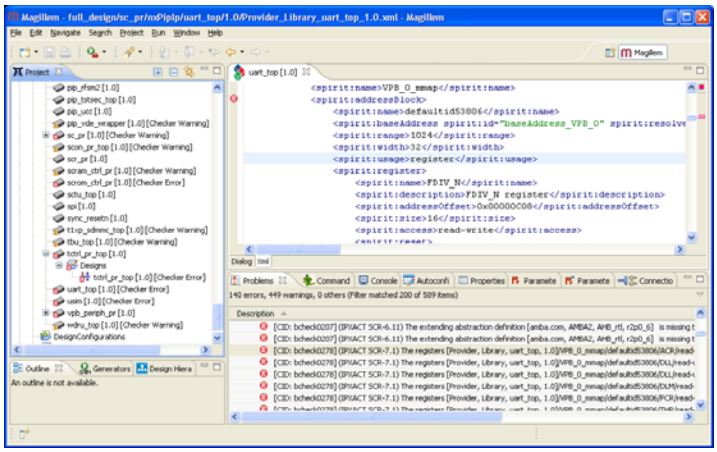
- ✓ Non intrusive, scalable and automatic process
- ✓ GUI and command line execution can be performed
- ✓ All syntax and semantic checks defined by the SPIRIT consortium are checked
- ✓ Perform additional DRC and IP packaging checks
- ✓ Supports all IP-XACT formats
- ✓ Checker report generation (text, html, rtf, pdf):



bcheck Nb	IP-XACT SCR	Severity	Message
bcheck0076	1.4	ERROR	Bus definition referenced in the component is missing. [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/t3_master_tim_HSBus/ [acme.HSBus.T3.2.0]
bcheck0076	1.4	ERROR	Bus definition referenced in the component is missing. [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/t3_master_tim_HSBus/ [acme.HSBus.T3.2.0]
bcheck0076	1.4	ERROR	Bus definition referenced in the component is missing. [acme, TQH, top_generated_check_170, 1.0]/t3_master_tim_HSBus/ [acme.HSBus.T3.2.0]
bcheck0076	1.4	ERROR	Bus definition referenced in the component is missing. [acme, TQH, top_generated, 1.0]/t3_master_tim_HSBus/ [acme.HSBus.T3.2.0]
bcheck0099		ERROR	Unable to connect instance transactional port iptg_HSBus_tim_initiator_inst_0_m_resp_port@netlister_internal_design_boundary to signal iptg_HSBus_tim_initiator_inst_0_m_resp_port_sig since their types are not compatible.
bcheck0099		ERROR	Unable to connect instance transactional port iptg_HSBus_tim_initiator_inst_0_m_resp_port@netlister_internal_design_boundary to signal iptg_HSBus_tim_initiator_inst_0_m_resp_port_sig since their types are not compatible.
bcheck0099		ERROR	Unable to connect instance transactional port m_req_port@iptg_HSBus_tim_initiator_inst_0 to signal iptg_HSBus_tim_initiator_inst_0_m_req_port since their types are not compatible.
bcheck0099		ERROR	Unable to connect instance transactional port m_req_port@iptg_HSBus_tim_initiator_inst_0 to signal iptg_HSBus_tim_initiator_inst_0_m_req_port since their types are not compatible.
bcheck0120	6.25	ERROR	A transactional port _must_ have exactly one service type definition to be netlisted properly. [acme, TQH, top_generated_check_170, 1.0]/iptg_HSBus_tim_initiator_inst_0_m_req_port
bcheck0120	6.25	ERROR	A transactional port _must_ have exactly one service type definition to be netlisted properly. [acme, TQH, top_generated_check_170, 1.0]/iptg_HSBus_tim_initiator_inst_0_m_resp_port
bcheck0120	6.25	ERROR	A transactional port _must_ have exactly one service type definition to be netlisted properly. [acme, TQH, top_generated, 1.0]/iptg_HSBus_tim_initiator_inst_5_m_req_port
bcheck0120	6.25	ERROR	A transactional port _must_ have exactly one service type definition to be netlisted properly. [acme, TQH, top_generated, 1.0]/iptg_HSBus_tim_initiator_inst_5_m_resp_port
bcheck0141		ERROR	The parameter [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/HSBus_TYPE/Value of format 'float' has a value prt_tim_HSBus::T3 of different format
bcheck0145		ERROR	The parameter [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/m_req_port/trans_service_type_def/tim_HSBus//ADDRESS_TYPE of format 'long' is depending of parameter [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/ADDRESS_TYPE of the format 'string'
bcheck0145		ERROR	The parameter [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/m_req_port/trans_service_type_def/tim_HSBus//HSBus_TYPE of format 'string' is depending of parameter [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/HSBus_TYPE of the format 'float'
bcheck0307		ERROR	The File Name ./include/iptg_HSBus_tim_initiator.h does not exist.Referred in [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/source-code. The resolved path is C:/Documents and Settings/sguntz/Bureau/test_170/include/iptg_HSBus_tim_initiator.h
bcheck0030	1.10	WARNING	Abstraction definition referenced in the component is missing. [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/t3_master_tim_HSBus/ [acme.TQH.T3_HSBus.2.0]
bcheck0030	1.10	WARNING	Abstraction definition referenced in the component is missing. [acme, TQH, iptg_HSBus_tim_initiator, 1.0]/t3_master_tim_HSBus/ [acme.TQH.T3_HSBus.2.0]

- ✓ Configurable severity level for each check
- ✓ Direct link to the error/warning/info location in Magillem IP-XACT editor for easier debugging
- ✓ Additional custom checks can be implemented for user-specific controls (Java, TCL supported) and added to the checker suite execution

Features



- Check all syntax and semantic checks defined in the standard
- Support IP-XACT 1.4, 1.5 and IEEE P1685 versions
- Custom check support
- Configurable check severity
- Checker reports in several formats

Benefits

To the IP provider:

- Assessment of IP description compliancy before its delivery to the integrator

To the IP integrator:

- Early verification on IP deliverables before integration and detection of any non standard information
- Check on platform assembly throughout its construction and exchange with other teams

To the Flow owner:

- Integration of the check suite into the flow to verify correctness of data

To the Project lead:

- Synchronization of collaborative work, verification, tracking, reporting

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Specifications

MCS FEATURES	
IP-XACT v1.4, v1.5 support	X
IP-XACT IEEE P1685 support	X
Checker execution	
GUI execution	X
Command-line execution	X
Checker type	
Syntax checks	X
Semantic checks	X
Additional DRC and IP packaging checks	X
Checker configuration	
Configurable checker severity	X
Definition of checker severity in a global policy file	X
Custom checker	
User specific custom-check implementation (in Java and TCL)	X
Configurable custom-check severity	X
Custom check link to error/warning/info location in IP-XACT editors	X
Checker report	
Checker report generation (in text, html, pdf, rtf format)	X
TCL API to browse report	X

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