

Jaguar

High Performance VHDL Analyzer

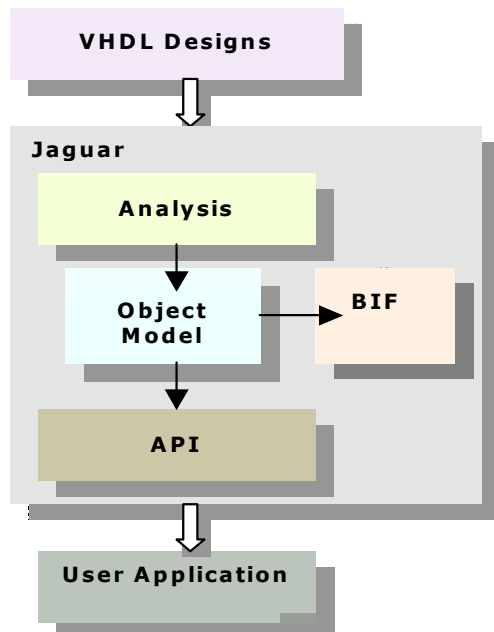


Addressing the needs of EDA tool developers who need to accelerate deployment of VHDL products, Interra offers Jaguar—a high performance VHDL analyzer. Jaguar is targeted as a customizable front-end for VHDL based applications, such as simulators, schematic generators, synthesizers, and code generators.

Jaguar is field proven and offers a best value solution. Jaguar analyzes the VHDL design description in one pass and generates a binary intermediate form, which is accessible through a well-defined intuitive API. The API provides an easy-to-integrate VHDL front-end to EDA applications. EDA tool developers can use the API to analyze as well as access designs for information, modify designs, evaluate expressions, perform elaboration, and optionally check for RTL subset compatibility.

Jaguar also supports PSL analysis for both embedded PSL and external verification units. Jaguar offers control options enabling applications to work with PSL and VHDL together.

Jaguar is available on Solaris, HP-Unix, Linux, and Windows platforms.



Key Advantages

- Supports IEEE 1076-1987 and 1076-1993
- Additional support for PSL 1850, V1.1 and V1.01
- Also supports some of VHDL 200X features
- Comprehensive coverage of VHDL constructs
- Comprehensive validation of syntax and semantics
- Backed by Interra's field-proven expertise in developing HDL analyzers

Highlights

- High performance VHDL analysis
- Well-defined, complete set of API functions
- Editable, extensible, and optimized object model
- Optimized binary intermediate format (BIF)
- Optional RTL subset semantic checks
- API functions for static expression evaluation and elaboration
- Browser utility for easy debugging by traversing the object model
- Partial analysis of designs through Scan function, which is suitable for large designs
- API functions for complete in-memory processing, bypassing BIF
- User-customizable library management scheme
- API functions to customize messages
- Support for user defined meta comments
- Support for encrypted regions in VHDL
- Capability for sorting design to perform compilation in right order
- Support for storing of user comments in the object model

Jaguar Features

Complete Language Support

Jaguar completely supports the VHDL language, both IEEE 1076–1987 and 1076–1993 versions. Jaguar performs very strict semantic checks on all language constructs. You can even switch off some semantic checks during analysis to reduce run time.

Jaguar also supports analysis of simple subset of IEEE 1850, V1.1 and V1.01. After analysis, both PSL objects and VHDL objects co-exist in memory.

VHDL 2008 Support

Jaguar supports several features of VHDL 2008, such as the new predefined array types, new logical operators, condition operator, matching relational operators, matching case statements, process all, function return subtype, etc. Jaguar would soon completely support VHDL 2008.

C Procedural Interface (API)

Jaguar's 'C' procedural interface provides the flexibility to integrate Jaguar with 'C' and 'C++' applications. The intuitive API function names facilitate a short learning curve.

The API provides iterator functions, which can iterate through objects of the same type and call user-defined functions. Jaguar comes with a decompiler application that helps you to understand the API for developing VHDL-based applications.

Powerful Object Model

The Jaguar Object Model (OM) is derived from the VHDL language grammar so that accessing the information from the OM is an intuitive process. The OM keeps direct reference to an object in an external design unit, saving significant runtime during the elaboration phase. Also, the OM stores the sizes and values of expressions whose sizes are determined at compile time.

Support for RTL Based Applications

Jaguar provides a runtime switch to perform RTL subset checking on a given VHDL description. Jaguar performs subset checking in compliance with industry standard synthesis policy. All compliance errors are reported either as an error or a warning, depending on the severity. If the design is RTL compliant, Jaguar annotates the object model with synthesis-specific information including inferred clock, set and reset signals, and expression sizes.

Partial Elaboration

You can use Jaguar API functions to elaborate a design unit. You can elaborate a fully instantiated design and evaluate the size and values of all globally static expressions, including function calls.

Debug Tools for Development

Using the API, you can easily decompile and browse any node in the object model.

The Decompiler utility enables you to write the complete in-memory object model as a VHDL description.

The Browser utility enables you to navigate through the OM.

User-Specific Meta Comments

Jaguar stores user-defined meta comments. You can not only access the meta comments, but also specify user-defined meta comments that are to be processed by Jaguar.

Customization of Error

Jaguar performs complete syntax and semantic checks on the design and detects as many errors as possible in the design in one pass analysis. You can easily customize the error messages for application-specific needs.

Static Expression Evaluation

You can use Jaguar API functions to evaluate and access the value and sizes of all locally static and globally static expressions, including functions.

Handles Encrypted Code

Jaguar handles encrypted code region inside a VHDL file. Jaguar provides a handle to your application to decrypt the code in the encrypted region and then populates the object model corresponding to it.

Also available: Cheetah System Verilog Analyzer