

Rsim specification

V5.0

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1. Overview

this document describes the whole strategy for developing vdt-v1.x version tools.

* 1. Use tool executor and options

• help message print.

• executing log print, rsim only displays key information such as invocation of commands, but will not display information of the command self, more information will be logged instead of screen printing.

• command based thread control, analyze the different commands and the reliance, and run it with multiple threads.

• -bo, build only

• -co, compile only

• -ro, run only

• -bc, build and compile

• -bcr, build compile and run

• $RSIM\_INIT, the init user config source file can be added by this envvar.

• -rg, run regression for a specified regression tag

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* 1. Major steps

1. reading user source files.

2. build, is the build and publish flow, will generate target verilog based files into target dir, so that can be used by EDAs for compile, simulation etc.

3. compile and elab, call EDA simulator to compile and elab the specified design configuration.

4. run test, call a run executor to start running a test. Tests are specified by test node.

* 1. Build features.

This section depicts the features in build flow. #TBD

* 1. Compile features

This section depicts the features in compile & elaboration flow. #TBD

* 1. Run features.

This section depicts the features in run flow. #TBD

1. Usage & Features

This chapter will list all possible usage/issues or features this tool are going to solve, it's kind of a very beginning state to collecting requirements and provide the features, and because of the lack of experience, this chapter may continue updating.

* 1. Build only.
  2. Compile only.
  3. Run only.
  4. Manually step chosen.

Manually add/skip certain steps, just like: ‘<comp,run>’, then will compile and run the flow, attention that steps like ‘<build,run>’ is illegal, but tool will not report error specifically for this kind of operation.

* 1. Regression support

Two types of the regression like simulation will be support, both of which will first try to build and compile a database, then run the remaining tests.

* + 1. Run a list of tests.

local run a certain list of tests, by giving a test list file.

* + 1. Formal regression

formal regression support, with specific options being forced, such as wave dump disabled, UVM verbosity to ‘NONE’ level.

* 1. Show available test lists.

'rsim -L', to list all available tests read by tool.

* 1. RhDass flow to generate \*.vsrc file into HDL module.

#TBD

* 1. Elaborating IP-XACT based meta-data.

See details in IP-XACT base chapter.

1. IP-XACT base

This chapter will describe all concepts and possible commands used for root and node files, which are used to assemble and run a project.

* 1. Component

Component is a central placeholder for all meta-data within the project. In typical IC project, it can be a collection of the certain purposed DV packages, HDL sources etc.

Example listed in <examples/component/node.rh>.

* + 1. fileset
    2. generator
    3. feature

Component feature declaration, to declare a Component based attribute that can be used within current Component object.

`feature ‘width’,1`

* 1. Design

Design, which is also means a design context, is collection of all components which will be included while loading it. The design can have component instances with specific views.

* + 1. view

A certain view of a design can be used to setup certain component instances, generator and tool options, by which a config can be easier by just using a certain view of a design.

* 1. Design configuration

A certain config is to generate a certain purposed design context. It can declare the views, parameters, and tool options that to run.

1. Options & Descriptions

This chapter will be messages for tool’s help mode.

#TBD.