

Ed Czeck
13 August 2007

August 2007

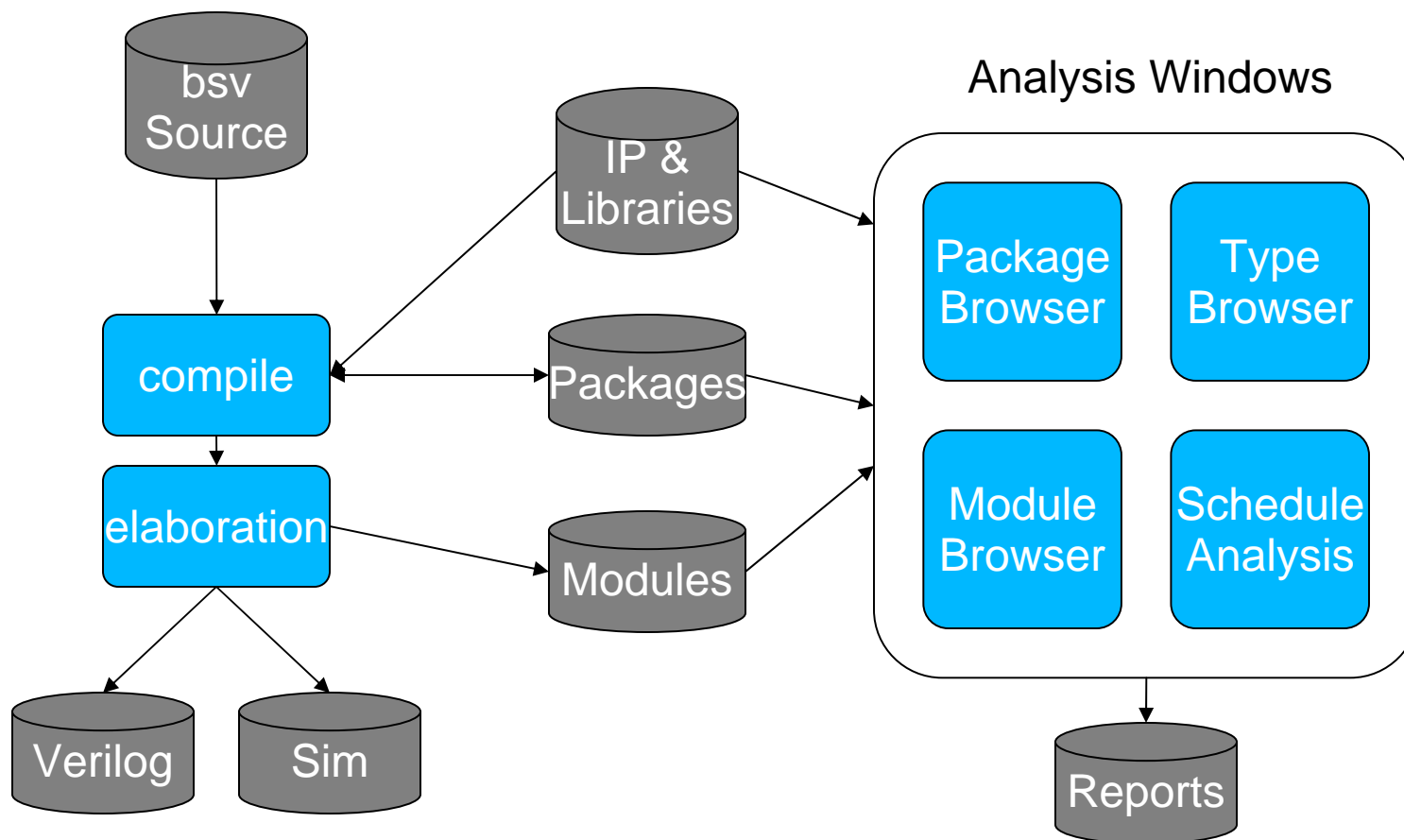
Overview

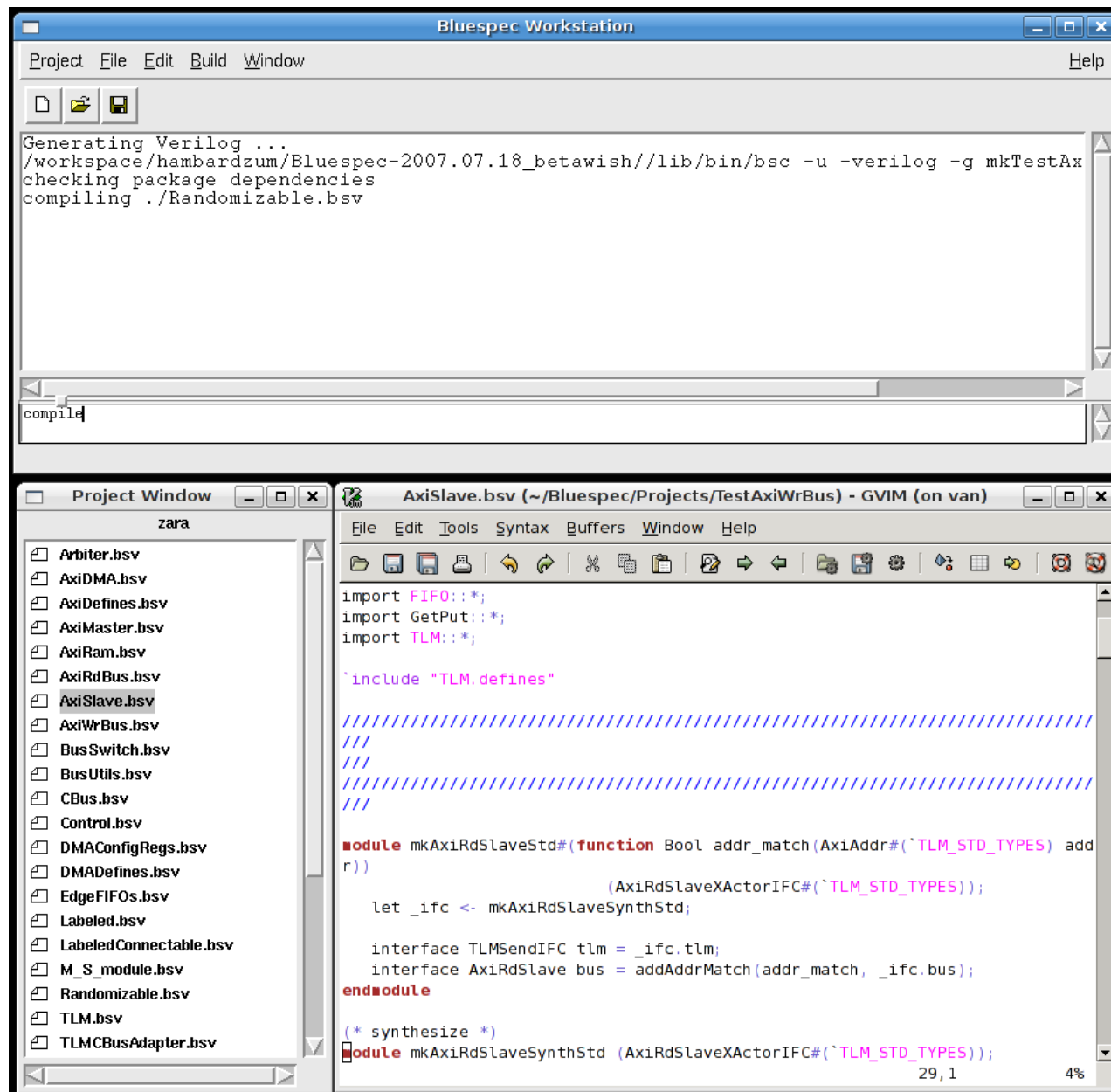
- ◆ Bluespec Workstation integrating development and debug with Bluespec SystemVerilog
- ◆ Features:
 - Single environment for compile, debug, simulate
 - Supports standard tools (editors, simulator, waves)
 - Adds Bluespec specific analysis
- ◆ Releases:
 - Beta, Fall 2007
 - General, Q1 2008

Bluespec Analysis Features

- ◆ Provide source level view of high-level data
 - Details hierarchical view of advanced types (structures, unions, enumeration, interfaces)
 - Maps complex types into Verilog bits
 - Links structures to wave viewing
- ◆ Provides graphical tools to analyze and verify rule schedule and method use
- ◆ Allows users to develop scripts for custom analyses or reports
- ◆ Beta, Fall 2007

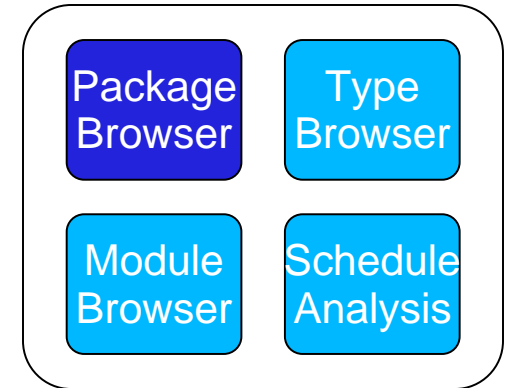
Workstation Architecture



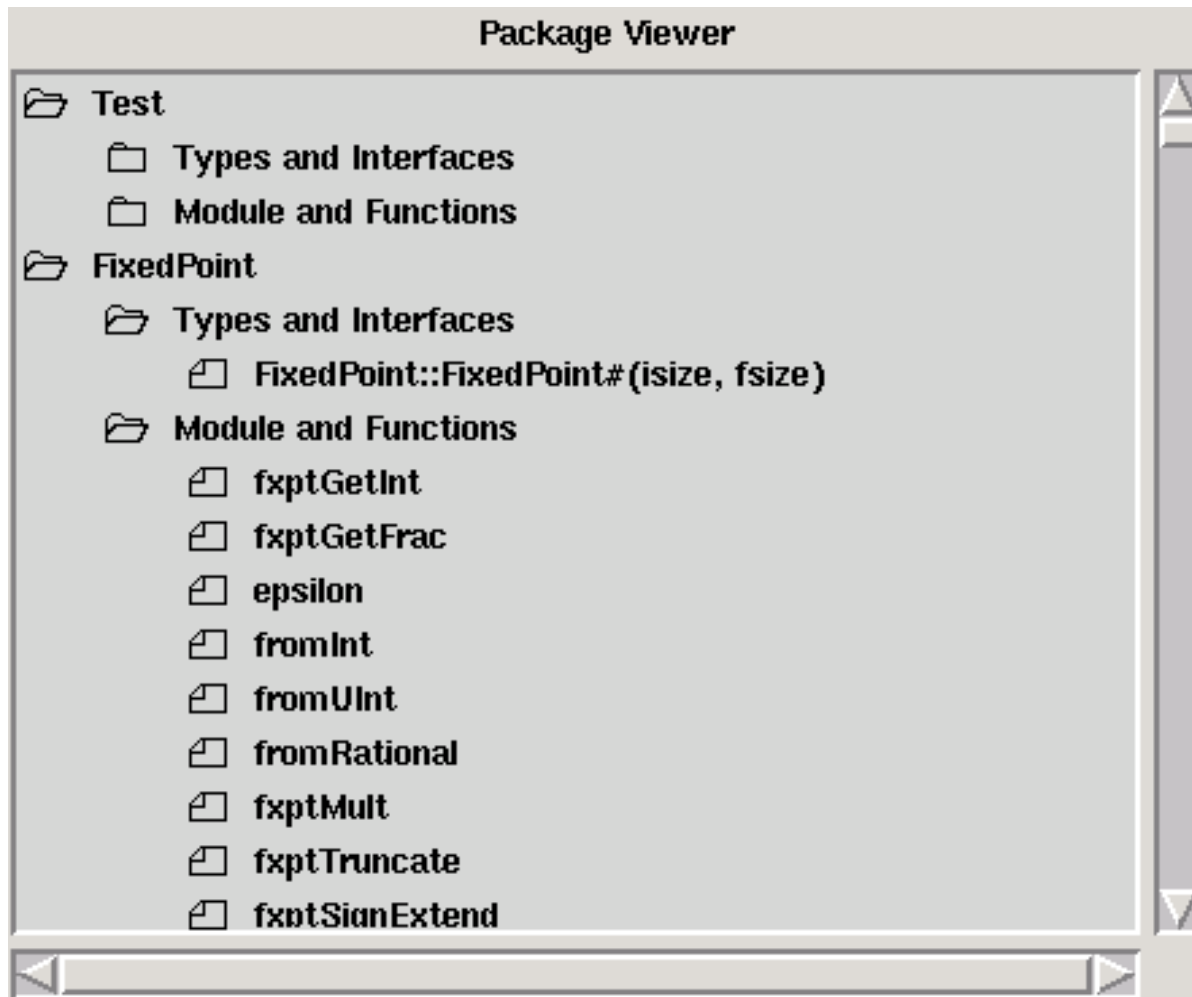


Package Browser

- ◆ Pre-elaboration view of design
- ◆ View package contents including:
 - Interfaces & types with type parameters
 - Modules & functions with argument type
- ◆ Links to source



Package Browser



Package
Browser

Type
Browser

Module
Browser

Schedule
Analysis

Type Browser

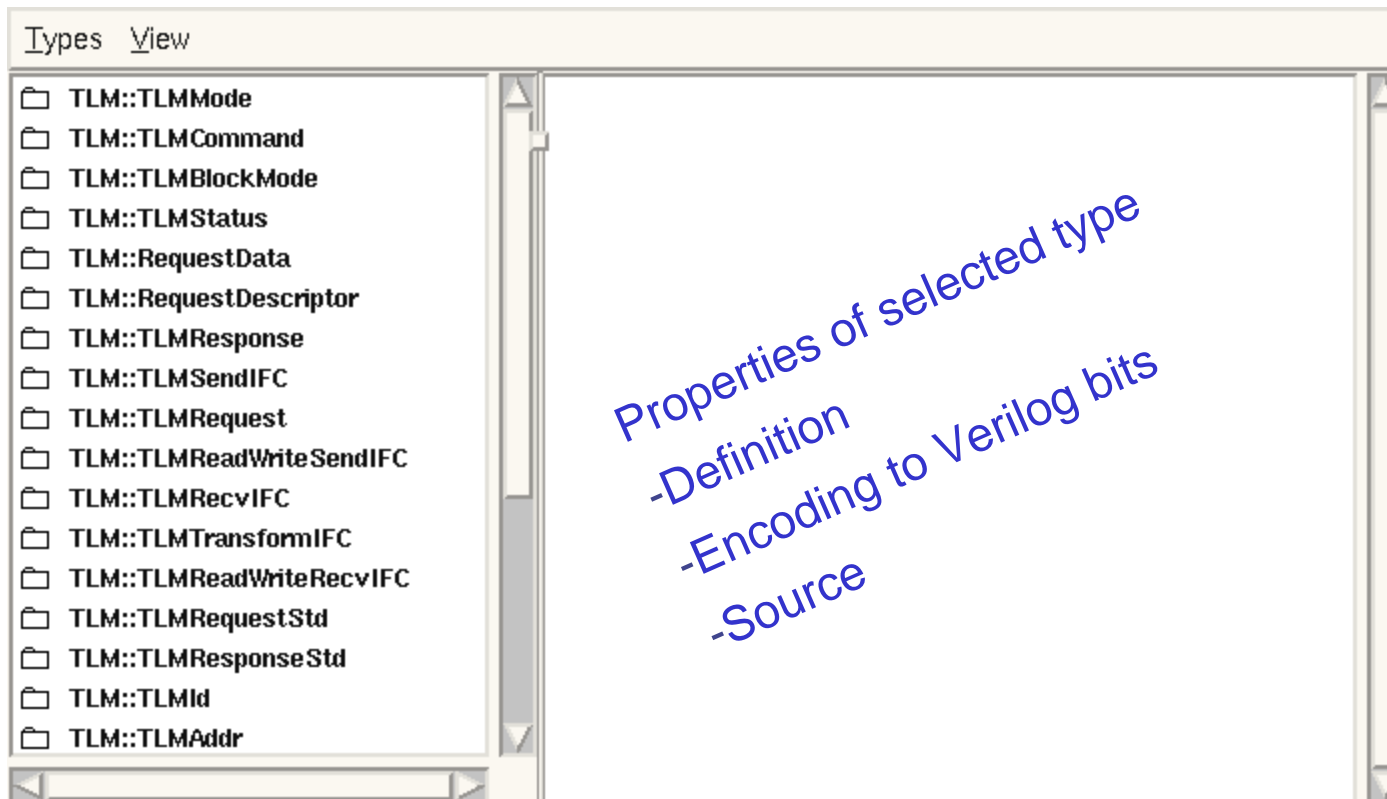
- ◆ Interactive type analysis
- ◆ Show details of any type
 - polymorphic or concrete
 - recursively expand interfaces, structs and unions
 - show fields and mapping to Verilog bits

Package
Browser

Type
Browser

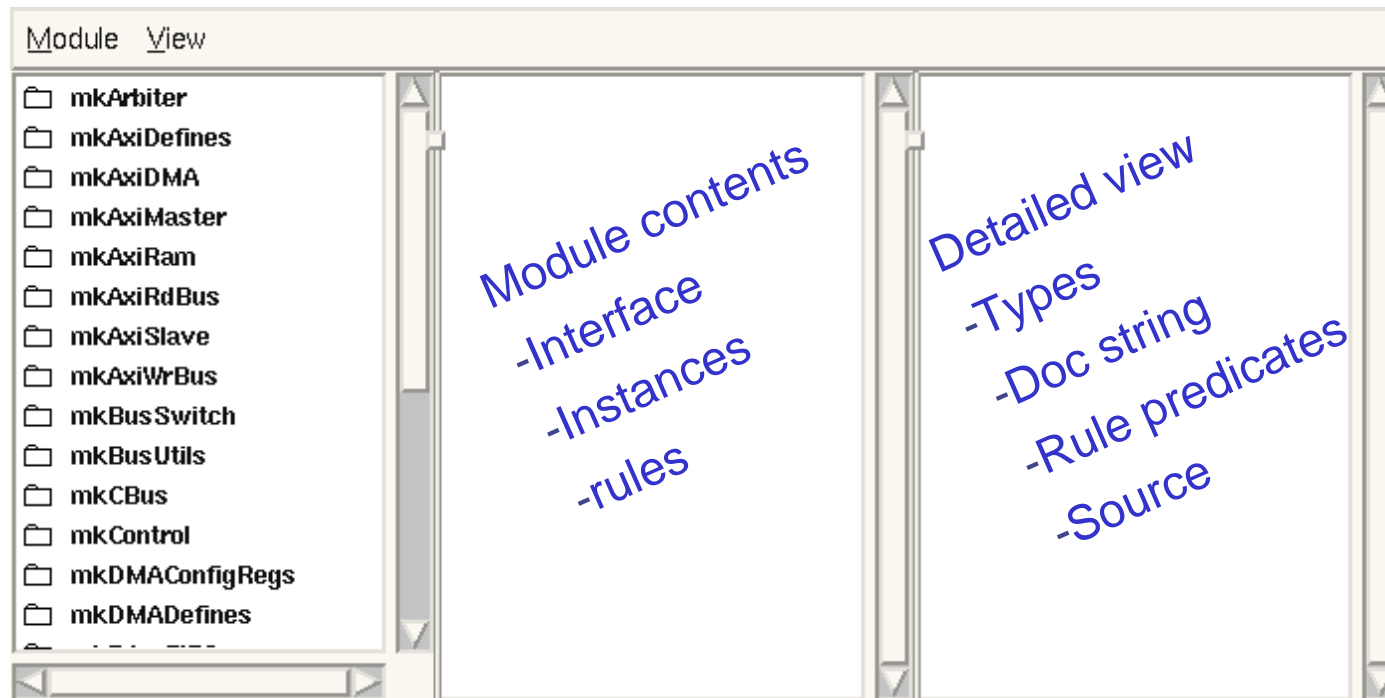
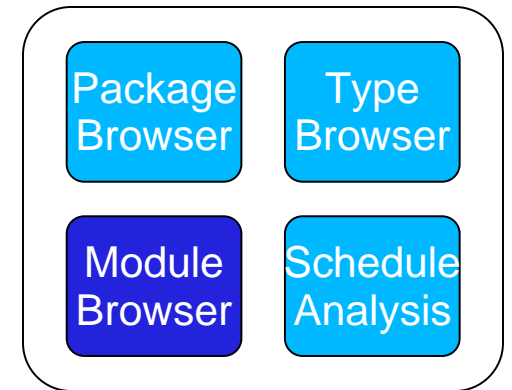
Module
Browser

Schedule
Analysis



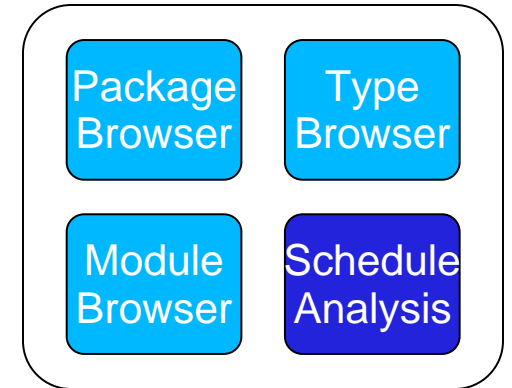
Module Browser

- ◆ Post-Elaboration Viewer
- ◆ Show module hierarchy and composition
 - instance name, types, and doc
 - rule predicates and method calls

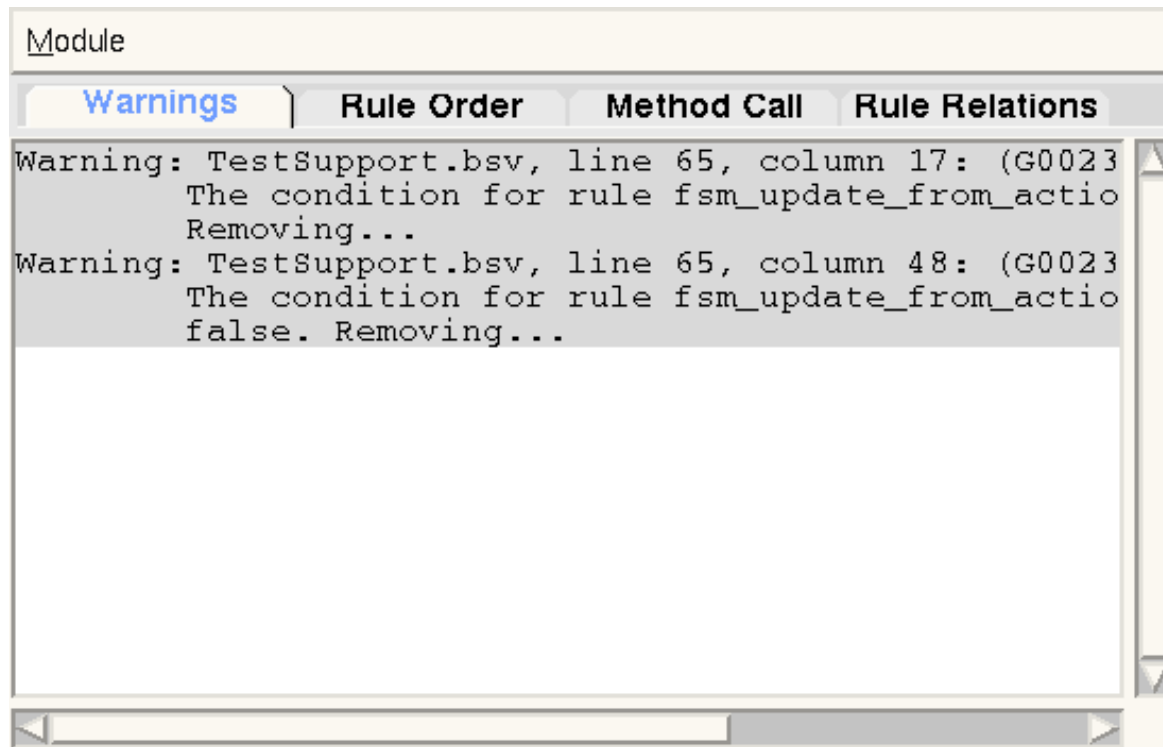


Schedule Analysis

- ◆ View and Analyze Schedule
 - Rule execution order
 - Instance/method call use table
 - Blocking rule
 - Messages from scheduling
 - Relation between any pairs of rule
- ◆ Possible to add custom report



Schedule Analysis



Package
Browser

Type
Browser

Module
Browser

Schedule
Analysis

Phase II Features

- ◆ Extend to Dynamic (simulation time) analysis
- ◆ Tight integration with Bluesim simulation: e.g. rule execution, rule condition analysis, interactive control, breakpoints, etc
- ◆ Design analysis, e.g., design structure, flop count, path delay estimates
- ◆ Others
- ◆ Scheduled Spring 2008

Feedback

Would love to hear suggestions and feedback:

Ed Czeck

support@bluespec.com