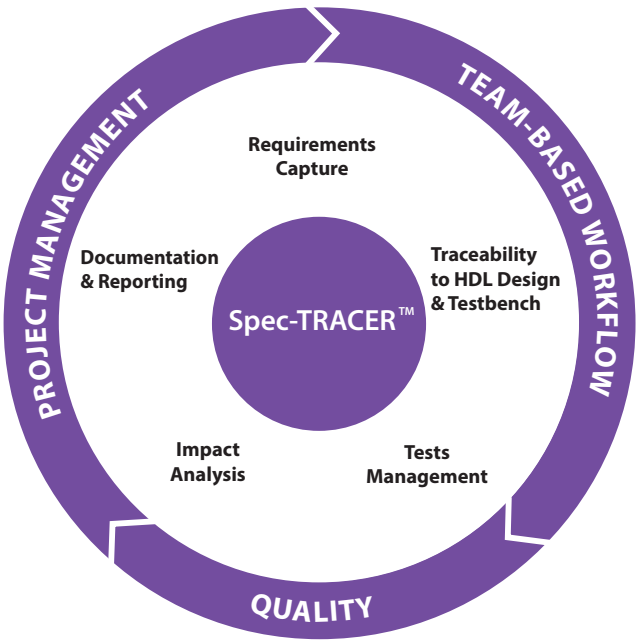
Spec-TRACER™ | Requirements Lifecycle Management

Complete Requirements Lifecycle for FPGA/ASIC Development

Spec-TRACER™ is a unified requirements lifecycle management application designed specifically for FPGA and ASIC designs. Spec-TRACER facilitates requirements capture, management, analysis, traceability and reporting that seamlessly integrates with HDL design and simulation tools. Traceability links between requirements and elements of the HDL design, testbench, log files and waveforms are established easily and upstream/downstream traceability reports are generated automatically.

Spec-TRACER helps manage, control and track requirements from specification to requirements, concept to design and verification plans to results.



Top Features

- Requirements Import (Word, Excel, DOORS)
- Traceability to HDL design and testbench
- Direct Integration to DOORS
- Tests Management
- Change Impact Analysis
- Requirements Coverage Analysis
- Predefined and User-defined Reports
- Version and Baseline Control at Requirements Level
- Supports Windows-Based HDL Simulators (Active-HDL™, Riviera-PRO™, QuestaSim®, ModelSim®, iSim®)
- Supports DO-254 Requirements Traceability

Take control of your Requirements

FPGA and ASIC designs continue to grow both in size and complexity, increasing the requirements that must be managed, tracked, implemented and verified. Engineers are under pressure to deliver high quality products on time and within budget, yet requirements change frequently during the project lifecycle, impacting other project elements leading to more changes and rework. Safety-critical applications face greater challenges with strict requirements-based development processes required to achieve compliance.

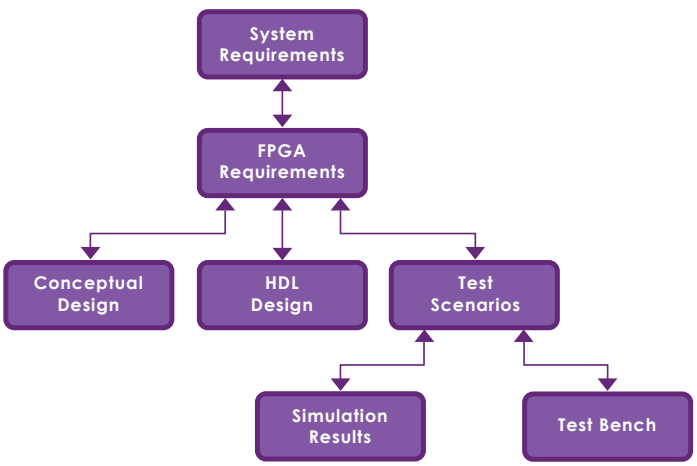
Combining a team-based methodology with project baseline configuration control, Spec-TRACER helps companies streamline the requirements engineering process, optimize the development cycle, improve collaboration, and reduce risk and costs.

Key Benefits

DO-254 Compliance

DO-254 enforces a strict requirements-driven process for the development of commercial airborne electronic hardware. For DO-254, requirements must drive the design and verification activities and requirements traceability is an efficient way to ensure this. Spec-TRACER provides traceability reports to show evidence of correlation between requirements, design and verification activities. Certification authorities are able to check traceability from system to FPGA requirements, FPGA requirements to conceptual design, HDL design and test scenarios, and test scenarios to testbench, test results, simulation logs and waveforms.

Requirements Traceability



Requirements Capture

Enables importing requirement documents via styles and tags in several formats including DOORS, Word and Excel. Accurately imports elements such as requirement ID, name, description, tables and figures. Simplifies adding, deleting and modifying requirements, and records the versions accurately.

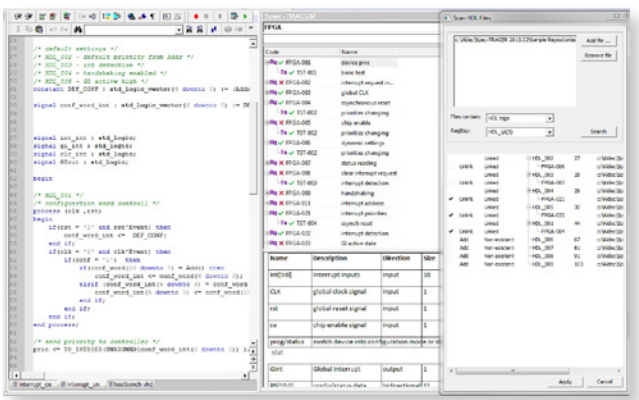
Tests Management

A mechanism to measure whether test cases have passed or failed is a key element in determining the completeness of the verification. Users are able to run simulations in the native simulator environment and Spec-TRACER can display the overall coverage analysis including traceability to test results such as directed tests PASS/FAIL status, functional coverage, PSL, logs, waveforms and code coverage.

Traceability to HDL Design and Testbench

Establish traceability from FPGA requirements to HDL design and from test cases to testbench, log files and waveforms. Seamless drag-and-drop operation to auto-generate HDL and testbench tags. Generate up/down traceability reports exposing uncovered requirements and unused HDL functional elements.

Traceability to HDL Source Code



Change Impact Analysis

Changes in requirements often lead to changes to other elements of the design such as HDL design, test case and testbench. Before the change is implemented, Spec-TRACER provides an impact analysis report that describes in detail which elements will be impacted and as well as the overall percentage of the potential work needed to implement the change. This report is valuable and critical to review before making any decisions to change a requirement.

Team-Based Methodology

A platform that enables collaborative work has been proven to directly impact project success by bridging the gap between disciplines and roles within a project. Spec-TRACER facilitates a team-based FPGA development process beginning with FPGA requirements capture, concept, design and verification - enhancing team communication and project organization.

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