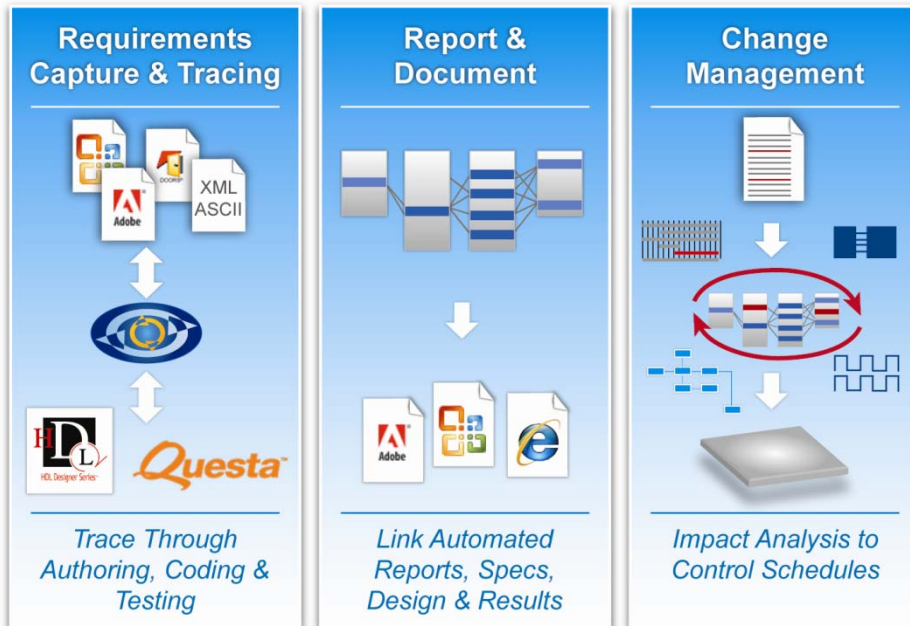


ReqTracer

Managing Requirements in your Design Flow

Safety Critical Design

D A T A S H E E T



ReqTracer is an efficient solution for managing requirements traceability and impact analysis across hardware project lifecycles.

Features

- Trace requirements through hardware design process
- Control and predict project schedules
- Link all project documents and HDL design tools
- Communicate via visualization and intuitive automated status reports

Benefits

- Improve overall project quality by meeting requirements
- Assess and manage impact of design requirement changes
- Satisfy safety critical design needs
- Support DO-254 compliance

A Best Practice for Project Management

The ability to completely trace and manage design requirements from specification through implementation is simply “good project management”. ReqTracer™ facilitates the deployment of a requirements management process while allowing the project teams to focus on their implementation and verification work for maximum efficiency. It is only when functionality and verification results fully meet the requirements that a project is complete and the project team can confidently put the product into production. This is beneficial to all projects, but especially needed in Safety Critical applications and mandatory for DO-254 certification, where product failure could result in injuries or fatalities. ReqTracer links, manages and tracks hardware requirements from multiple sources throughout the design process, provides easy documentation and reports at any stage, and manages the impact of requirement changes. The result: better control and predictability of design schedules and improved overall product quality.

Infrastructure & Integration

- Requirements linked from many sources
- Include corporate and external standards, e.g. DO-254
- Uniquely integrated with FPGA and ASIC design tools
- Integration with commercial requirements management tools for continuity across the project
- Integration with version and configuration management tools

Traceability

- Visually trace across all documents
- Clearly track requirements status
- Impact analysis of engineering change orders (ECO) or any requirement change

Documentation

- Simplify design reviews with automatic documentation generation
- Comprehensive and configurable report builder

ReqTracer in the Process

Requirements tracing should be approached proactively throughout the project development.

Capture

- Connect authored requirements from many database and file sources and formats
 - Telelogic DOORS™, IBM® Rational® RequisitePro®
 - Microsoft® Office, Adobe® Acrobat® and Framemaker®, XMP, ASCII, HTML
- Add documents to the project
 - User requirements, acceptance tests, design specification, RTL design files, testbench, integration tests, verification results, bug tracking

Tag

- Link relationships and dependencies
- Prevent missing updates via dynamic links
- HDL data types
 - Reference requirements within design and testbench
 - Reference within HDL code and visual diagrams
 - HDL Designer™

Trace

- Visually trace requirements ↔ design ↔ implementation ↔ verification
- Trace entire or selected requirements
- Trace top-down and bottom-up

Monitor/Analyze

- Determine completeness of requirements coverage
- Identify extraneous code
- Immediate notification of requirement changes, additions, deletions
- Assess risk and project schedule/cost with upstream and downstream requirement change impact analysis

Verify Results

- Status of requirements against the test plan
- Create requirements-based test plan template
- Validation of verification and simulation test results from Unified Coverage Database (UCDB)
 - Questa® and ModelSim®
- Coverage measurements

To learn more about ReqTracer contact Mentor Graphics or visit our website www.mentor.com/reqtracer

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Report

- Generate reports automatically
 - Traceability matrices, impact analysis, inconsistent requirements, and more
- Customize report format
- Simplify project status, design reviews, and audits
- Output in a wide variety of formats
 - Microsoft Office, Adobe PDF, HTML



ReqTracer provides valuable visibility into the status of the design against the requirements throughout the hardware design process.

Safety Critical Design / DO-254

Safety Critical Design means “the design requirements exactly match the verified implementation”. ReqTracer can provide the proof needed to deliver end products that meet these requirements and satisfy the needs for DO-254 certification which is mandatory for all complex electronic hardware (ASICs, FPGAs, PLDs) in airborne systems.

Clear top-down and bottom-up traceability proves verified requirements, traceability of ECOs and confirms changes were fully implemented and validated, and reports aid in successful audits and reviews.

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