

Title of Paper

Making Traceability Work: How Developers Will Like Testing Requirements

Presenter

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Instructional Level

Introductory Intermediate Advanced

Target Group

Quality Managers and Quality Experts not only responsible for testing but also for specification, feature documentation or requirements.

Quality Managers and Quality Experts wanting to adopt the 'traceability methodology' to improve testing.

Keywords

- Requirements Based Testing
 - Development Models
 - Requirements Management with focus on QM
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Abstract

Traceability is defined as linking software requirements back to expectations of the stakeholders and forward to implemented coding and test cases, test plans and test activities.

As development department "Server Infrastructure" we decided to pilot the new traceability methodology, which was originally designed for applications with defined stakeholders and a high degree of manual test cases. Being a department which develops the SAP JVM, optimizes performance on operating systems and improves the SAP kernel, the methodology does not fit in any way. We reduced traceability to the core and developed a process sequence which is transferable to any software development project.

Making traceability work in 8 steps:

1. Find your stakeholders and convince them to write their expectations down. Review all expectations, accept or reject and define your workload for the next development cycle. Don't bother about the effects of your increasing rejection rate.
 2. Start architecture reviews before putting effort into specification and design.
 3. Let the experts write a proper specification which will be loved by your technical writer also. Put down each important software requirement according to the 'shall/should' methodology.
 4. Be prepared to discuss step 3 repeatedly with your developers. Depending on the awareness level of the developers multiple training sessions are needed.
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5. Hold a requirement review to be sure that the requirements are precise enough to be linked to a test case afterwards. Developers will love that.
 6. Let the developers implement the software specified and don't forget that a feature shall only be final with an automatic test or a test case description attached.
 7. Document all implementation activities in your project management system.
 8. Link every single requirement in your QA system to a test case (automatic or manual).
 9. Start testing. Congratulations: you are traceable if every test result of a test case is linked to a software requirement from the specification which is linked to a stakeholder expectation written down.

Implementing traceability is not about tools only - although good tools are helpful. Implementing traceability is about software people and their mindset. Developers shall start thinking about test cases before coding anything. Quality Managers and Quality Experts shall participate in the process of defining and reviewing requirements. Traceability will help both groups, developers and quality people, to ensure the software product quality in an early stage.

Biography

Dr. Britta Stengl is Quality Expert, ISTQB certified tester and SAP R/3 certified consultant. She has been at SAP AG in the Walldorf headquarter since 1997. Currently responsible for the quality management of NetWeaver Foundation Server Infrastructure, including SAP JVM and central components of the SAP kernel, Britta Stengl is author of several books and articles regarding CRM implementation, plant maintenance and knowledge management.

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