

Title / Titel

Test Automation with Keywords: A Case Study

Speaker(s) / Referent(s)

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Abstract / Zusammenfassung

In this talk, we present a report on our experiences with functional test automation using the keyword driven approach. The first part of the talk explains the methods and concepts behind keyword driven testing. In the second part, we discuss the results that keyword driven testing had on the project: cost savings and improved quality.

The talk begins with an explanation of how keyword driven testing was understood within the project. The approach is based on similar principles to those used in software development: modularity and reusability. Keywords are understood as modules of test functionality and can be used (referenced) throughout a test. Each keyword is named meaningfully to improve the readability of the tests. Despite the similarity to concepts in software development, programming tasks are not necessarily a part of test automation with keywords.

Following the introduction to keywords, the talk continues with a report of how this method was implemented in the project. Points of discussion include:

- How the focus on structure and reusability required us to plan and structure our automation at the beginning.
- Which keywords proved themselves to be useful (reusable, flexible) in the project, and which keywords were less useful (not so reusable or flexible).
- The effects that this approach to automated testing had on the test and development process.
- The measures taken to keep the number of keywords to manage in the project to a minimum.

The talk concludes by presenting the results of the test automation in terms of quality assurance and test process. Using keywords requires more initial planning but the structured, modular approach shows its benefits later on, in particular:

- Cost and time savings in the final test phase before a release. The manual test effort to release the software was reduced to a fifth of the previous effort.
 - Improved quality in the software. Error statistics show a difference in reported errors – the amount of errors found by the QA team in the test phase was reduced when automated tests were introduced. It is noteworthy that only 50 errors were found in the acceptance phase in the project, which ran for 5 man years. Most of these errors were in category C.
 - The effort for test automation was measured at 10% of the total project cost.
 - The low maintenance costs for the tests allowed continual regression testing.
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- Reuse of test modules and workflows meant that the test progress and coverage grew quickly.

Biography / Biografie

Alexandra Imrie has a Master's degree in Phonetics and Phonology. At BREDEX GmbH she has various roles including working on concepts and planning in the development process as well as manual and automated testing, documentation, customer support, training and demonstrations.

Thomas Mahler studied Electrotechnics at Braunschweig with a focus on data processing technology and communications engineering. Since 1986 he has held various positions at Volkswagen AG. His current project is a system to support the testing and control of measuring equipment. The EPUS system manages around 500,000 pieces of equipment and is used in 13 locations around the world.

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