

RESEARCH
DEVELOPMENT

SOFTWARE



web2test

Powered by QFS

cross browser • cross platform • 100% AJAX capable

WHITEPAPER

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INTRODUCTION

Increasing use and permanent enhancement of Internet technologies lead to „Internet enabled“ business processes in almost all economic areas. Even entire new business arises in base of Web applications. Considering these aspects the testing of Web applications comes to the fore of business decision making.

Reduced periods of development of business processes and software technology occur together with growing quality requirements and pose two basic problems of strategic corporate planning:

- Ensuring higher quality results in increasing costs for software development by increasing test expenses. With the help of test automation the costs remain nearly constant in relation to quality improvement.
- Growing complexity of software systems demands much of quality management. Business processes can be tested only by simulating user activities. Manual testing causes not only high costs and investment of time, but is error-prone and not all-embracing. Test automation provides more efficient and repeatable quality inspection and ensures sustainable improvement of products.

„ROI“ and „time to market“ on the one hand, customer-related and own quality standards on the other hand need to be taken into account for realization of software projects. The road to success is marked by an optimum ratio of these two aspects.

itCampus web2test exists as a tool for automated tests of web-based applications, web pages and portals. It focuses on minimization of expenses for development and maintenance: All tests tolerate changes of layout.

WHAT IS TEST AUTOMATION?

WHAT DISTINGUISHES TESTING WEB APPLICATIONS? SEPARATION OF WEB TESTS FROM OTHER TEST AREAS.

Further development and enhancement of Internet technologies led to a large number of different Web browsers. For various reasons (removal of security holes, competition to support the latest standards) producers interpret Web standards in different ways. The functionality of the various browsers is not uniform. Even one and the same browser can show different functionality on different platforms. These two facts cause a huge variety of browser-platform combinations which have their effect on test setting.

itCampus web2test exists as a tool for automated tests of web-based applications, web pages and portals. It focuses on minimization of expenses for development and maintenance: All tests are independent of operating system and Web browser.

itCampus web2test supports the „Capture/Replay“ procedure for testing of Web-based user interfaces. An remarkable feature of web2test is that it tests not only the graphical interface but also through the GUI the entire system. Test procedures are automated via interaction with the web browser. itCampus web2test

simulates user activities (mouse clicks, keyboard entries, etc.) on the level of the user interface. This ensures 100% Ajax/WEB 2.0 capability.

SUMMARY OF FEATURES

itCampus web2test is a software for the automation of system tests of web-based applications, websites and portals. The software system is a co-operation project between QFS (www.qfs.de) and itCampus (www.itcampus.de). It comprises a frontend developed and licensed by QFS which takes care of job sequencing and test case management and a web module developed by itCampus for browser-based application testing.

Based on this general setup, the system offers a great variety of features for test management and test automation, it makes it easy to create test runs without programming knowledge, comes with additional Jython and Groovy script embedding and test debugging features and with an intelligent recognition method for GUI components.



itCampus web2test is available for Windows and Unix (incl. Linux, Solaris).

A fundamental unique selling point of the software is the intelligent recognition of GUI components via different heuristics. This will render individual tests tolerant against changes to the GUI.

itCampus web2test can also be used for platform and browser-independent regression tests of web applications. It currently supports the platform/browser combinations:

Windows - Internet Explorer, Mozilla/Seamonkey/Firefox and Linux - Mozilla/Seamonkey/Firefox.

The „Look&Feel“ of working with the test scripts and test cases is mostly identical to QFS's "QF-Test" software. Unique features that deserve particular mention are the browser and platform-independent test scripts and its real user simulation capabilities during the execution of the test scripts. itCampus web2test is 100% Web2.0/AJAX compatible.

Combining the itCampus web module with the reliable QFS frontend, web2test provides the full range of capabilities and features of QF-Test for web test automation.

The web2test licenses acquired from itCampus cannot be expanded to include the Java engines Swing or SWT offered by QFS. The combination of Java and a web engine in the same license is only available from QFS.

KEY FEATURES

- GUI-related system tests
- tests are tolerant to GUI changes
- intuitive user interface
- quick start due to „capture and replay“
- no programming knowledge necessary for creation and maintenance of test scripts (drag & drop/copy & paste)
- clear structuring of complex test cases
- flexible reporting (test reports, test execution reports, test documentation)
- integrated test debugger
- scripting Interface (Jython, Groovy)
- comprehensive handbook and tutorial
- excellent price- performance ratio
- free evaluation
- direct access to the DOM of the browser (incl. JavaScript Bridge)
- browser and platform independent test cases
- real user simulation (100% AJAX support)
- uses browsers installed on the test system - no additional browser plugins necessary
- affords dynamic customization of browser settings (proxy, cookies, locale, etc.)
- Supports all major web application frameworks (e.g. GWT, ExtJS, SAP WD, JSF, JSP, ASP.NET)
- Integration with common test management tools (e.g. HP TestDirector for Quality Center)
- Data driven testing
- Distributed testing

For testing of Java Swing and SWT applications our co-operation partner QFS (www.qfs.de) offers the appropriate test software.

ECONOMIC BENEFITS

itCampus web2test affords quality improvement of any web applications - extremely cost effective. Shortens test phases and maximizes ROI through:

- automation of repetitive tasks
- optimization of test applications
- modification and reuse of test scripts
- cost savings on testing staff (no need for programmers/developers to create test scripts)
- simplification of the planning and execution of functional tests with realistic user simulation
- comparison of expected and actual results of a testing process for all kinds of application scenarios such as web-based CRM and ERP solutions
- minimization of time and cost for the creation of test cases because all scripts are browser and platform independent

SYSTEM REQUIREMENTS

- MS Windows 2000, XP, Vista, 7
- Java from version 1.4
- Linux-Distributions with Linux kernel from version 2.6 (e.g. SuSE 10, Ubuntu 8)

Depending on the type of test:

- Internet Explorer versions 6, 7, 8
- Mozilla 1.8, Seamonkey from version 1.0 (likewise Firefox from version 1.5)
- Firefox Versions 3, 3.5, 3.6 (likewise Seamonkey 2)

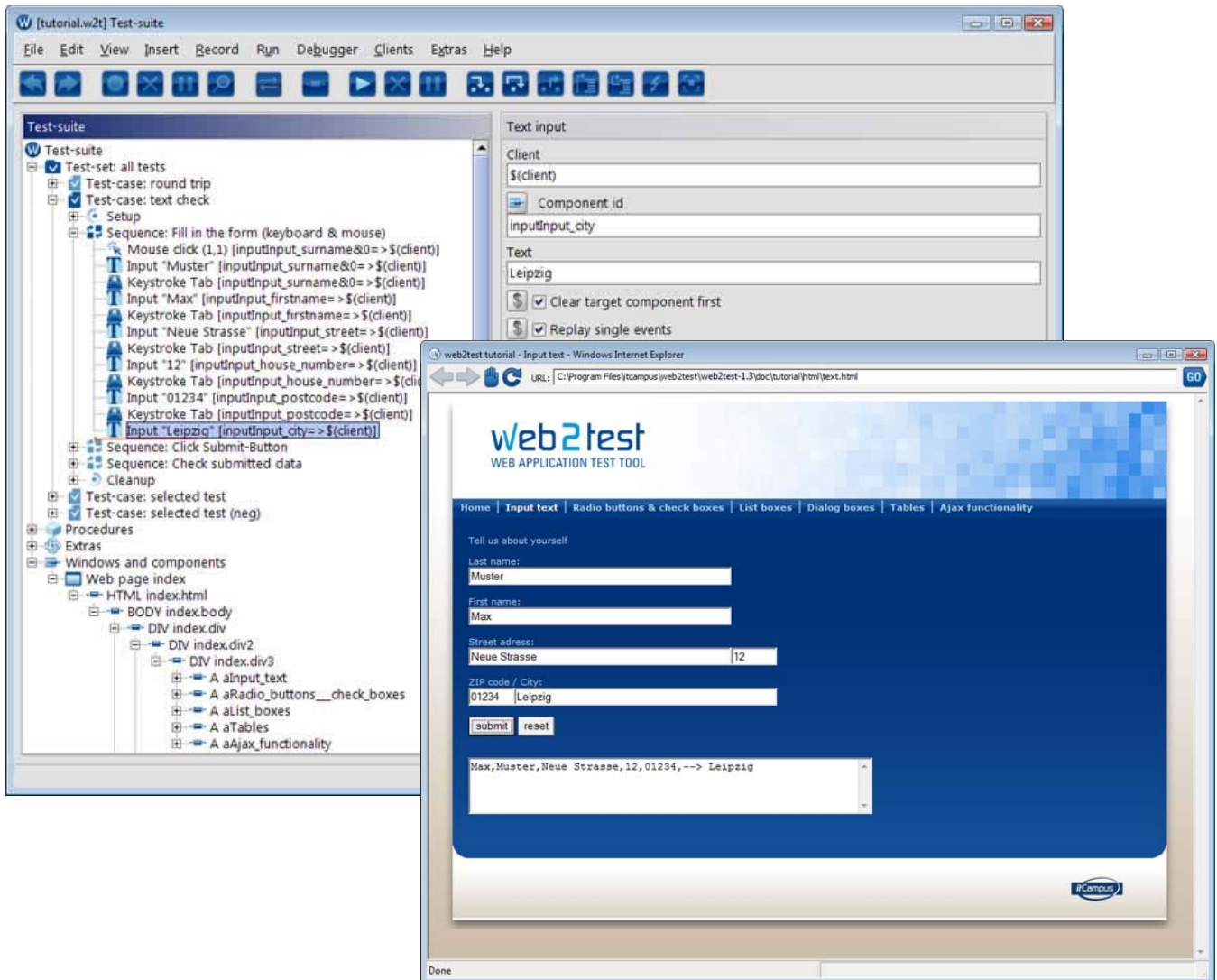
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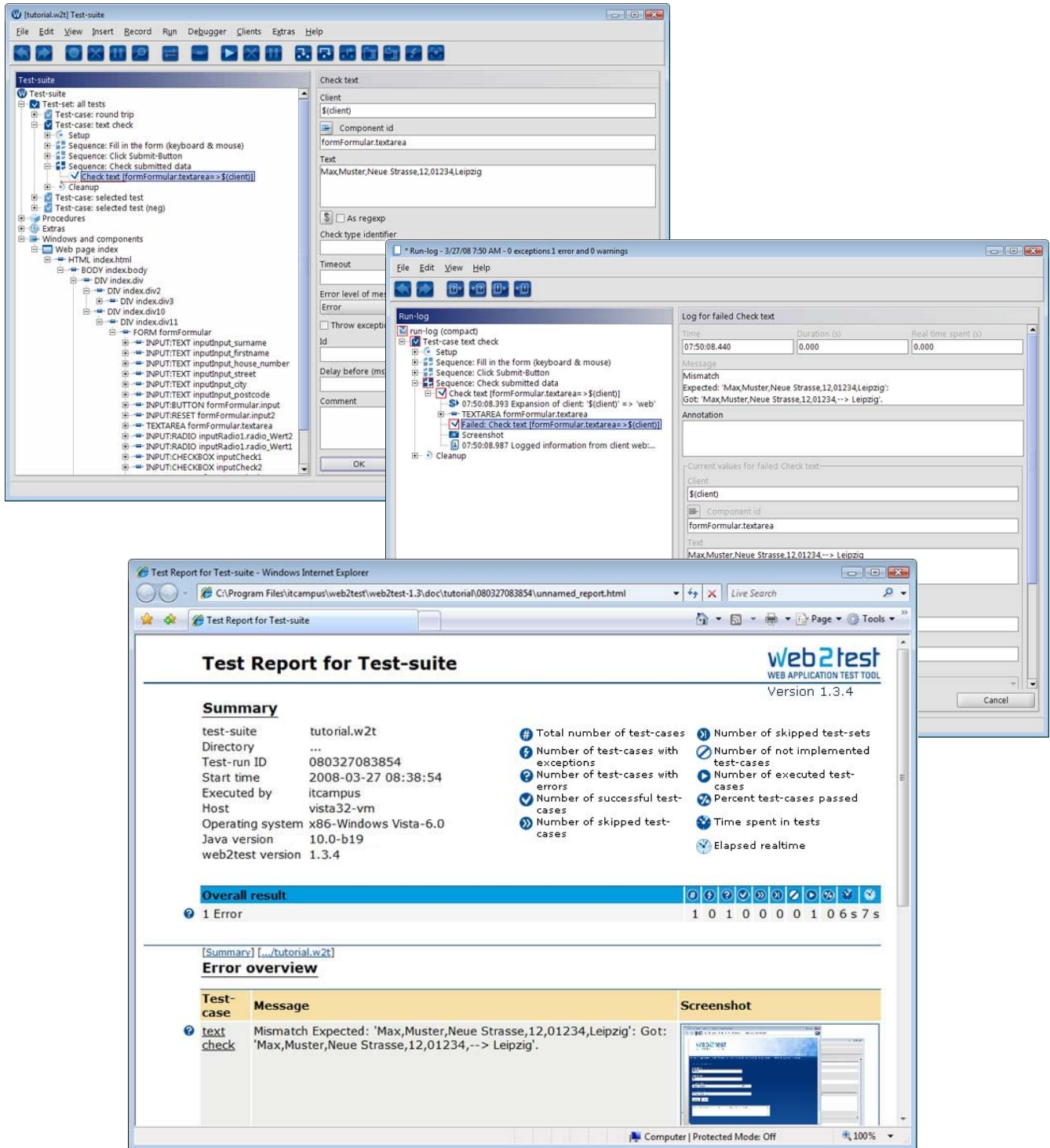
Diploma thesis: „Creation of software components for test automation of web-based applications“

Diploma thesis: „Development of a test framework for testing co-browsing systems“

Diploma thesis: „Development of a dynamic platform independent library for external connection of web-browsers“

SCREENSHOTS





The screenshot displays the web2test application interface, which is used for configuring and executing web application tests. It is divided into several main sections:


- Test-suite Configuration:** A tree view on the left shows the test suite structure, including test cases, sequences, and components. The right pane shows the configuration for a specific check text, such as the client name and component ID.
- Run-log:** A window showing the execution details of the test suite, including the sequence of steps and the results of each step. A failed check text is highlighted in red.
- Test Report for Test-suite:** A report window showing the overall results of the test suite, including a summary of test cases, an error overview, and a screenshot of the failed test case.

Test Report for Test-suite Summary:

test-suite	tutorial.w2t	Total number of test-cases	Number of skipped test-sets
Directory	...	Number of test-cases with exceptions	Number of not implemented test-cases
Test-run ID	080327083854	Number of test-cases with errors	Number of executed test-cases
Start time	2008-03-27 08:38:54	Number of successful test-cases	Percent test-cases passed
Executed by	itcampus	Number of skipped test-cases	Time spent in tests
Host	vista32-vm		Elapsed realtime
Operating system	x86-Windows Vista-6.0		
Java version	10.0-b19		
web2test version	1.3.4		

Overall result: 1 Error

Error overview:

Test-case	Message	Screenshot
text check	Mismatch Expected: 'Max,Muster,Neue Strasse,12,01234,Leipzig': Got: 'Max,Muster,Neue Strasse,12,01234,--> Leipzig'.	

CONTACT

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web2test is a quality product of itCampus

itCampus is an innovative software development company closely cooperating with international scientists and researchers. Founded in 1999 in the cities of Halle and Leipzig in Germany, the company today has offices in Germany, the UK, Switzerland and Italy. Since 1 April 2009 Software AG is itCampus' majority shareholder. Software AG is the world's largest independent provider of Business Infrastructure Software. itCampus provides communication solutions, IT consultancy services and custom solutions in the fields of software development and human-computer interaction. itCampus is ISO 9001:2008 certified.

