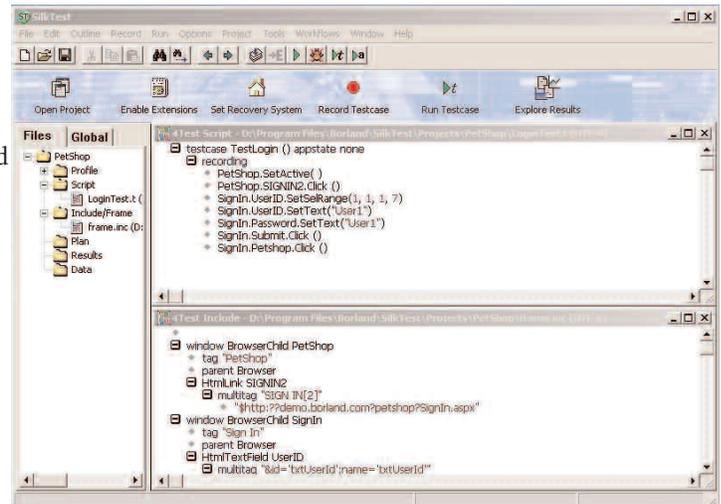# Borland® SilkTest®
Robust Functional Test Automation

INCREASE TEST COVERAGE AND ENSURE APPLICATION ACCURACY THROUGH AUTOMATED REGRESSION, CROSS-PLATFORM AND LOCALIZATION TESTING

Borland® SilkTest® is the leading tool for automating the functional testing process of enterprise software applications via the application Graphical User Interface (GUI). Its powerful test automation capabilities make it the perfect solution for regression, cross-platform and localization testing across a broad set of application technologies including Web, Java™ or .NET and client/server, within the confines of today's short testing cycles. Designed for realizing automation benefits even when applied to complex test cases, SilkTest provides a host of productivity-boosting features that let you easily cope with changes in the Application Under Test (AUT). Additionally, SilkTest's powerful testing framework enables high reusability of test scripts across test projects, which further increases the achievable ROI. With less time spent on building and maintaining regression testing suites, your QA staff can expand test coverage and optimize application quality.

Testing an application with Borland SilkTest

FEATURES AND BENEFITS

REALIZING THE BENEFITS OF AUTOMATED TESTING
SilkTest delivers the efficiency and productivity benefits of functional test automation while mitigating the classic challenges faced when implementing automated GUI testing, such as lack of time, budget and resources. Successful automation consists of a manageable development effort, re-usable and easily maintained test assets, the ability to run the automation whenever and wherever it's needed, and quick and accurate results analysis. SilkTest enables all of these elements to help you realize the benefits of your automated testing efforts. With SilkTest, functional test automation leads to quality and cost advantages:

- Higher QA productivity and lower testing costs
- Higher test coverage
- Consistent and repeatable test results
- Ability to create powerful testing frameworks and include Business Analysts in the testing process
- Reduced costs of defects

RAPID AUTOMATION INFRASTRUCTURE DEVELOPMENT
With today's shortened product release cycles, creating enough tests to thoroughly verify your application's reliability can be a daunting task. SilkTest offers many features to promote rapid test development, such as the Basic Workflow for recording tests, the Data Driven Workflow for linking a single test case to test data values stored in an external table, and Code Completion for improved productivity in script creation and automation infrastructure development.

CONTINUOUS PRODUCTIVITY
A critical capability for an automated test solution that is commonly overlooked is the ability to react when systems fail while being tested. SilkTest offers unique features for running tests that includes an out-of-the-box yet extensible Recovery System that allows tests to run unattended 24/7. Should an error occur, such as an application crash, the error is logged and the application is restored to its original base state, so subsequent tests can continue to run and produce valid test results.

EASE OF MAINTENANCE
To meet another classic challenge of test automation - fragile test scripts that break when Applications Under Test (AUT) are modified during development - SilkTest provides a powerful and low-maintenance GUI abstraction layer called GUI maps, which map the graphical elements of the AUT to the lower level test objects SilkTest generates. When an AUT's GUI is modified enough to require updating the GUI map, Project Workspaces help you to quickly identify which GUI map to update. Often the only maintenance needed is modification of the abstraction layer; tests that reference objects defined in the layer can continue to run unmodified. Project Workspaces also facilitate updates to tests when application logic changes.

PRECISE SIMULATION OF END-USER EXPERIENCE
SilkTest accesses the AUT exactly as a real user would - through its GUI - resulting in thorough testing of the user experience. To enable tests that even span distributed machines, SilkTest emulates user actions via a separate agent component. As the agent only carries a small footprint it can be easily deployed on remote machines.

A SINGLE FLEXIBLE AND POWERFUL TEST LANGUAGE
All tests within SilkTest, whether recorded or scripted, are created using 4Test. An object-based fourth-generation language (4GL) designed to address a full spectrum testing

FEATURES AND BENEFITS (Continued)

needs. The portability of 4Test enables you to automatically test an application across all supported application environments, platforms (e.g., OS, browser) and localizations from just one test script - greatly simplifying test maintenance. In addition, the 4Test language offers all the commands, data types and functionality that you would expect from a leading-edge programming language. It allows you to expand the scope of a test case by adding looping and branching statements. You can also include exception handling to ensure the robustness of scripts.

In addition to GUI checks to verify application logic, database verifications using standard ODBC access can help ensure the accuracy of complex transactions.

INTEGRATION WITH BORLAND® SILK™ PRODUCT SUITE

SilkTest offers test development, execution and results reporting across multiple application platforms directly from within its IDE. For analyzing failed test runs, SilkTest uses Borland® TrueLog-technology, which provides visual front-end diagnostics from the end-user perspective for every action of the test script.

In addition, SilkTest offers seamless integration with Borland® SilkCentral® Test Manager for advanced process-oriented test management, including requirements verification and validation, test planning, test scheduling for unattended executions across various platforms, localizations and configurations, as well as an integration with internal and external defect management software. SilkTest also integrates with Borland® StarTeam® for advanced version control and management of test assets such as projects and scripts.

KEY FEATURE HIGHLIGHTS

SELECTED FEATURES

- Recovery System for 24/7 unattended testing
- Basic Workflow for instant productivity
- Data Driven Workflow for testing business logic functionality using externally stored data
- Code Completion for rapid test customization and automation infrastructure development
- Project Workspaces for organizing and sharing test information
- GUI abstraction layer for easy-to-maintain reusable tests and scripts
- Extensible, highly portable and easy-to-maintain scripting language
- Agent technology for enabling individual tests to span distributed machines
- TrueLog-technology for visual front-end diagnostics of script actions from the end-user perspective (beta)
- Integration with Borland SilkCentral Test Manager for advanced, process oriented test management and issue tracking
- Integration with Borland StarTeam for advanced version control and management of test assets such as projects and scripts

SYSTEM REQUIREMENTS

OPERATING SYSTEM

- SilkTest IDE and SilkTest Windows Agent
  – Microsoft® Windows® 98 SE, Windows ME, Windows 2000, Windows XP or Windows Server 2003

- SilkTest Linux and UNIX Agent
  – Red Hat® Enterprise Linux® WS 2.1 or 3.0
  – Sun® Solaris™ 9 or 10

HARDWARE

- Intel® Pentium® processor with minimum of 200 MHz, 64 MB RAM, and 60 MB available disk space

SUPPORTED ENVIRONMENTS

- Browser GUIs
  – DHTML (JavaScript and CSS)
  – XML data (XML/XSL Web pages)
  – Microsoft HTC/HTA
  – Java Applets

- Web Browser
  – Internet Explorer 6 and 7 (beta)
  – Mozilla Firefox 1.5 (beta)
  – NetScape Navigator: 7, 7.1
  – AOL 9 and 9 Security Edition

- Java GUIs
  – Eclipse 3.0, 3.1 and 3.1 SWT Standalone and Rich Client Platform (RCP) applications

  – Java AWT
  – Java Foundation Classes (JFC, Swing)
  – Symantic Visual Cafe´

- Java
  – Sun JVM 1.4, 1.5 (Playback on Linux, Solaris and HP-UX via SilkBean)
  – Microsoft JVM
  – Sun Plug-in

- .NET GUIs
  – Microsoft .NET WinForms
  – Infragistics NetAdvantage WinForms (in Forms UltraWinGrid and UltraWinToolbar controls) 5.2, 5.3 and 6.1

- .NET
  – Microsoft .NET CLR 1.x, 2.0

- Native GUIs
  – VisualBasic 6/Active X
  – PowerBuilder 9.0, 10.0, 10.2 and 10.5
  – Win32, MFC
  – Motif (on Solaris and Linux)
  – SAP GUI 6.2 and higher (with SilkPerformer for SAP GUI functional testing)
  – Custom GUI objects via SilkTest Extension Kit

- Internalization
  – Full Unicode enabled (excluding PowerBuilder, Motif and SilkBean)

ABOUT BORLAND

Borland Software Corporation is the global leader in platform independent solutions for Software Delivery Optimization. The company provides the software and services that align the people, process, and technology required to maximize the business value of software.

Borland®

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