PRESS INFORMATION

TESSY 4.3 from Razorcat with Extended Test Management for High Test Quality and Integrated Test Environment Editor TEE

Latest release offers new tools for test management to ensure test quality and seamlessly integrates the Test Environment Editor (TEE) into the TESSY GUI

Berlin/Germany, October 9, 2020 – Razorcat presents a new release of its proven unit and integration testing tool TESSY. TESSY 4.3 has integrated its Test Environment Editor (TEE) as a new perspective in the TESSY GUI. With the three content-focused views, the environment parameters can be edited quickly and conveniently. An exclusive innovation in TESSY 4.3 is the mutation test for the analysis of the test case quality. It complements the standard code coverage analysis and by generating mutants ensures test (case) quality. Another new advance is the "Test data pattern": Applied to pure output variables, it explicitly proves the correct calculation of test results. Additional "Execution types" control the fully automated tests for test and test case quality.

TEE: Efficient usage of environmental parameters

The new Test Environment Editor (TEE) is directly and quickly accessible in TESSY with its own TEE perspective. Using its three views with filters and comparison options, the corresponding contents can be edited efficiently. The "All Environments" view shows all available system configurations that TESSY supports. The "Project Environments" view reveals the system configurations selected for the current project and stored in the TESSY configuration file. The "Attributes" view shows the attributes and settings for the selected system or project configuration.

World first mutation test: Achieve test quality and test objectives

Standards such as IEC 61508, ISO 26262 etc. require code coverage as a test objective to ensure the completeness of the tests – this is known to be not enough. To make tests really safe, the tests must be checked for quality.

The mutation test automatically analyzes the test cases based on the detection of temporary code changes, so-called mutants. These subtle mutations can reveal, for example, whether the test method of boundary value analysis has been implemented correctly in the test cases. The mutation score as a result of the mutations detected by the test cases therefore provides the test management with an additional metric for achieving these test objectives.

The mutation operators and the associated scope of the mutation test can be defined in the settings by predefined or user-defined sets. A special view displays the mutants themselves and their detection.

Test data patterns to ensure test quality for output variables

The "Test data pattern" function is used to check the correct setting of the interface regarding the passing direction of output variables. All test cases are automatically initialized with data patterns and thus ensure the independence of the test cases: Successful test cases prove that all expected results of the output values have been explicitly calculated.

New test execution types for automatic testing of test quality
The dialog for controlling the test execution has been significantly enhanced due to the new functions. The test execution type "Run without instrumentation" executes the "pure" test cases without instrumentation of the source code. "Run with test data pattern" initializes all output variables with configurable data patterns, while the "Run mutation test" executes the configurable mutation test.

Further information about Razorcat's unit and integration testing tool TESSY 4.3 release, as well as downloads and support services, are available at www.razorcat.com.

About Razorcat
Razorcat Development GmbH has been creating testing tools for software development of embedded systems since 1997. The unit and integration testing tool TESSY is certified to IEC 61508 and ISO 26262, and is being used in a large number of software projects across all branches of industry for the verification of safety-critical and high-quality software. Together with the Integrated Test Environment (ITE), Test Operator Platform (TOP) and Check Case Definition Language (CCDL) tools, Razorcat offers solutions for all stages of the testing process. Services like test management, testing, consulting and seminars provide additional support for customers around the world.

More information about Razorcat is available at www.razorcat.com.

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