TEST SYSTEM

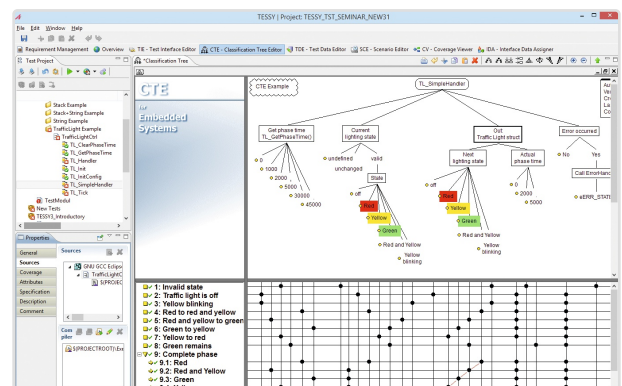# TESSY®

automated
unit/integration tests

TESSY automates the whole test cycle including regression testing for your embedded software in C/C++ on various target systems. As a certified test tool TESSY supports all industry-leading compilers, debuggers and microcontrollers as well as host simulation.

TESSY is qualified for safety-related software development according to IEC 61508 / ISO 26262.

TÜV SÜD
Functional Safety

Razorcat

TESSY®

TESSY® as one of the first unit test tools is today's leading solution for testing of embedded software. Designed to support development and testing according to standards, TESSY is well established to be used for high-quality products and safety-critical applications.

Key features for unit and integration testing

- Intuitive test design and automated workflows
- Manage, link and trace requirements
- Edit test data within spread sheets and user code
- Support for testing of software variants
- Define time-based component testing scenarios
- Test execution on hosts, simulators and hardware
- Plot test results graphically
- Analyze code coverage in flow chart graphics
- Generate customizable reports in several formats
- Command line scripting for continuous integration

Efficient testing and traceability

TESSY reduces manual tasks to a minimum making the verification process scalable, transparent and less susceptible to errors. Generation of test specifications, test execution and reporting are automated by TESSY to provide consistent traceability which is also required for certification.

Continuous adaptations

The broad range of supported compilers, target debuggers and interfaces to third party tools is continuously enhanced. Adaptation of TESSY for specific systems, interfaces or optional features can be offered on demand.

Easy data handling

Comfortable spread sheet editors with issue highlighting and access within the Classification Tree Editor make data handling easy. Use numerous import/export formats for uncomplicated exchange of test data and requirements.

Straightforward regression testing

TESSY detects changes in the source code automatically. Based on these changes TESSY pre-assigns the interface elements and automatically adapts the user code to facilitate fast and straightforward regression testing.

Test driver generation

TESSY automatically generates the complete test framework including stub functions and all external references.

Code coverage analysis

TESSY includes seven different coverage measurements which can be selected individually or according to norms and standards. Coverage results are visualized in a graphical flow chart linked with colorized source code views as well as in textual form. Powerful navigation through the flow chart easily reveals uncovered branches and conditions being spotlighted within the code view.
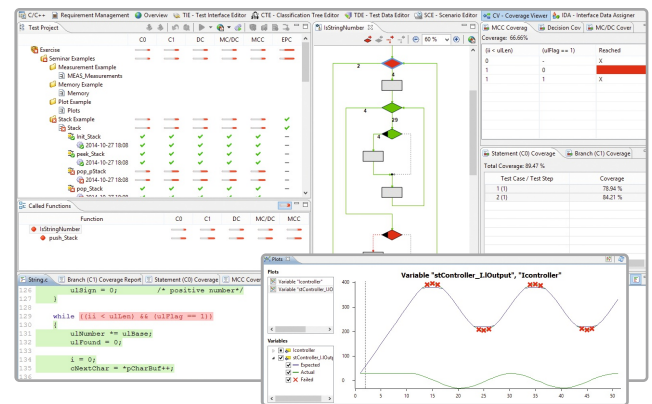
Systematic test design with the integrated Classification Tree Editor (CTE)

CTE

CTE is a comfortable graphical editor for the Classification Tree Method (CTM). This method is an intuitive and systematic way to transform a (functional) specification into a set of error sensitive and low-redundant test case specifications. Test relevant aspects and their recursive partitioning in equivalence classes build the classification tree. Test cases are defined in a second step by combining classes of the tree to specify inputs and expected results within a combination table. The resulting test case specifications are generated automatically and the test cases can immediately be executed.

This method covers the aspect of model-based testing and the requirements of standards. It is well applicable for black box testing based on the module design specification. The visualization of the test specification leads the tester through the test design and reduces complexity.