New features in TESSY v4.2

CTE extensions

A generator for classification trees has been added that generates a new tree based on the interface of a test object. A classification will be generated for each input variable with the possible values as classes according to the equivalence partitioning method.
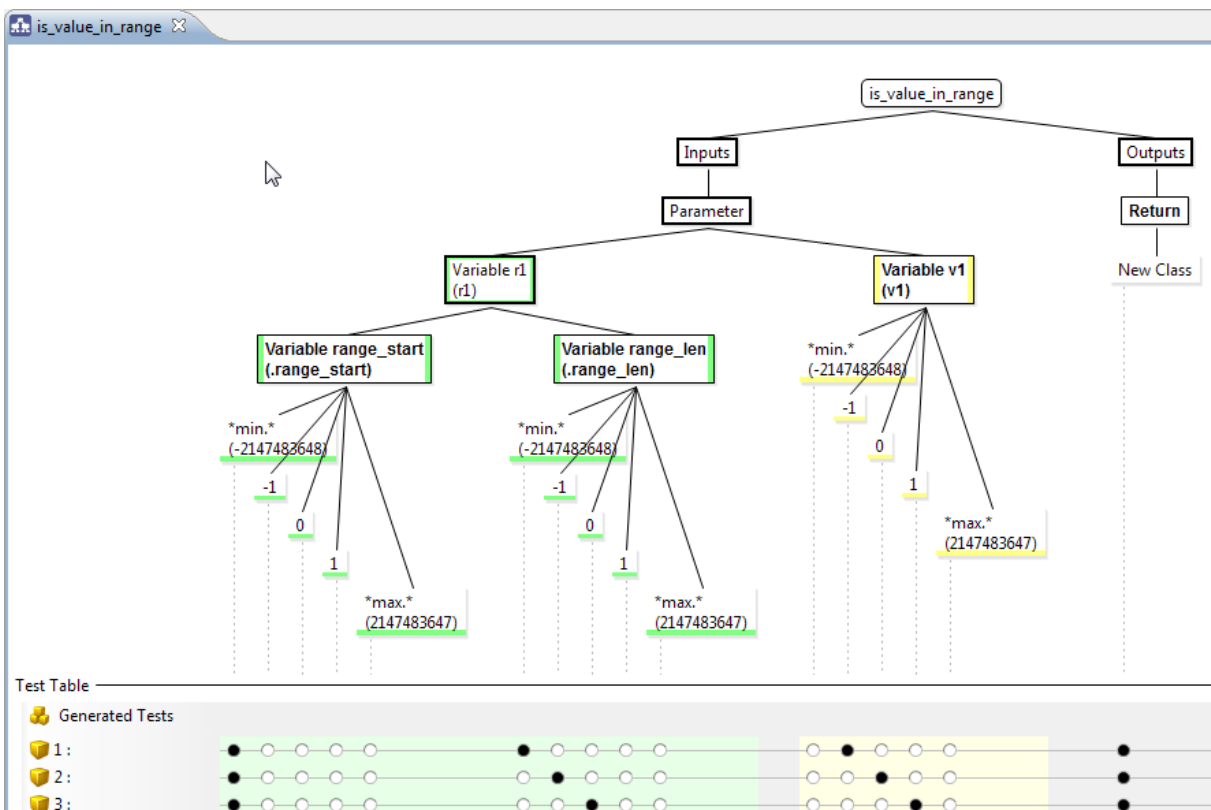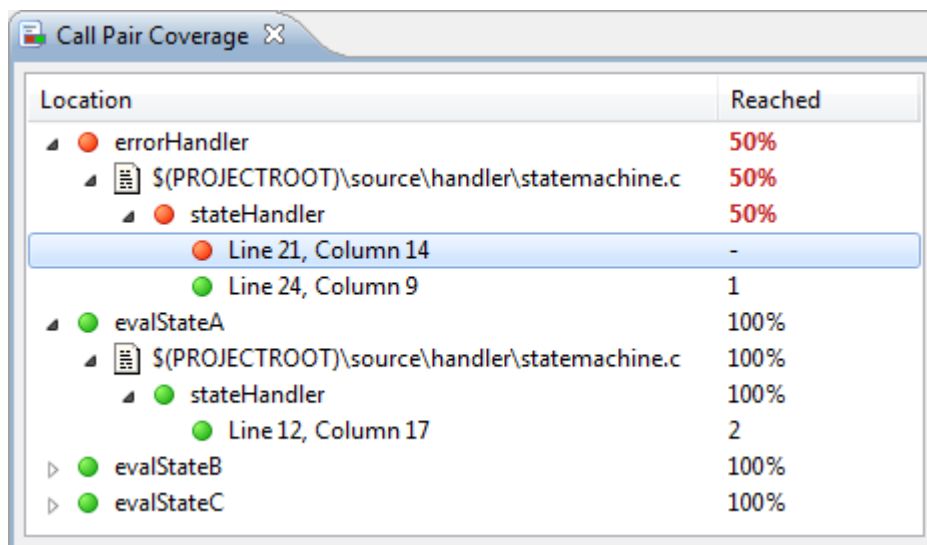

The new project-wide data dictionary provides means to assign application domain related names to implementation variables that can be used throughout all CTE test specifications. Data dictionary entries will be synchronized on interface changes and related CTE classifications will be updated automatically.

Component tests for C++ modules

The component test feature has been extended to also support testing of C++ source code. The necessary objects for calling the work tasks and stimulated methods will be created as synthetic variables within the test interface. The respective objects are selected within the properties view of the scenario editor (SCE) perspective.

Call pair coverage

The new call pair coverage measurement (CPC) now supports measuring if all call locations of functions or methods within the test object have been exercised at least once. This fulfills the requirements of ISO 26262 as an alternate coverage method for integration testing instead of applying the function coverage (FC) method.
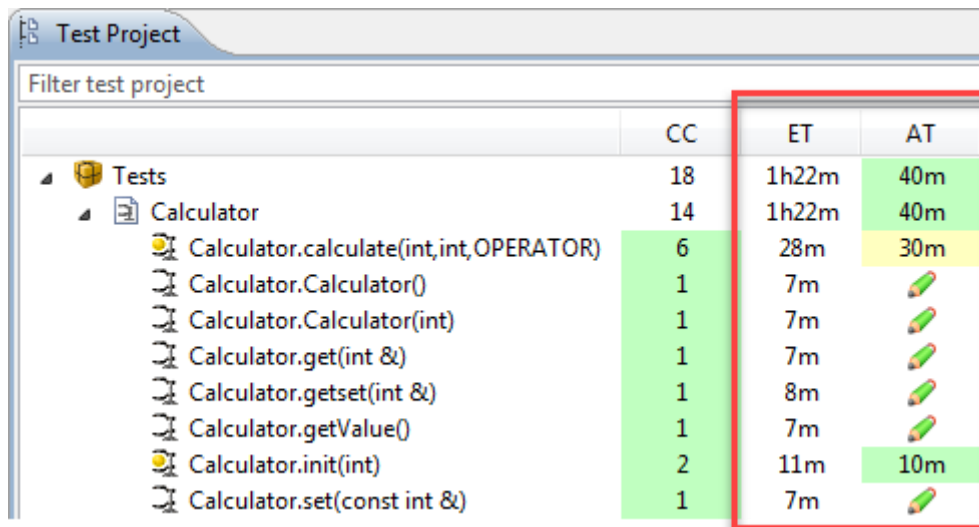
Location	Reached
▲ ● errorHandler	50%
▲ 🖹 $(PROJECTROOT)\source\handler\statemachine.c	50%
▲ ● stateHandler	50%
● Line 21, Column 14	-
● Line 24, Column 9	1
▲ ● evalStateA	100%
▲ 🖹 $(PROJECTROOT)\source\handler\statemachine.c	100%
▲ ● stateHandler	100%
● Line 12, Column 17	2
▷ ● evalStateB	100%
▷ ● evalStateC	100%

Testing effort estimation and tracking

The new testing effort estimation is based on a customizable formula that is based on the available metrics provided by TESSY. Additional metrics have been added that can also be used within the time estimation formula:

- Number of statements
- Number of calls
- Nesting depth

When analyzing a module, the estimated time is updated based on the given formula. The actual time can be tracked within the test project view for each test object.
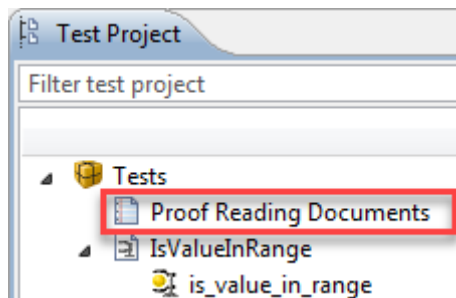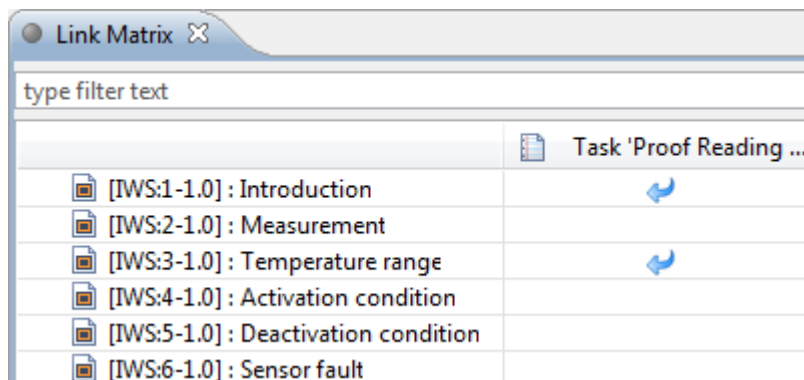
Warning and error level thresholds as well as the formula itself can be defined within the preferences.

Automated requirement reviews

A new task element provides means to protocol external tests and reviews and link them to requirements. This allows full verification coverage of requirements that are not testable with a normal unit or integration test.

Each task has a passed/failed test result and PDF or image files can be attached as a documentation of the review process. The result of a task counts as one test for all linked requirements which provides full coverage also by external test or review.