TESSY V4.1 Features

New features in TESSY V4.1 (compared to TESSY V4.0)

Frank Büchner, August 2018 --- 001

Contents

1 Classification Tree Editor (CTE)

New design and additional features for the Classification Tree Editor (CTE)

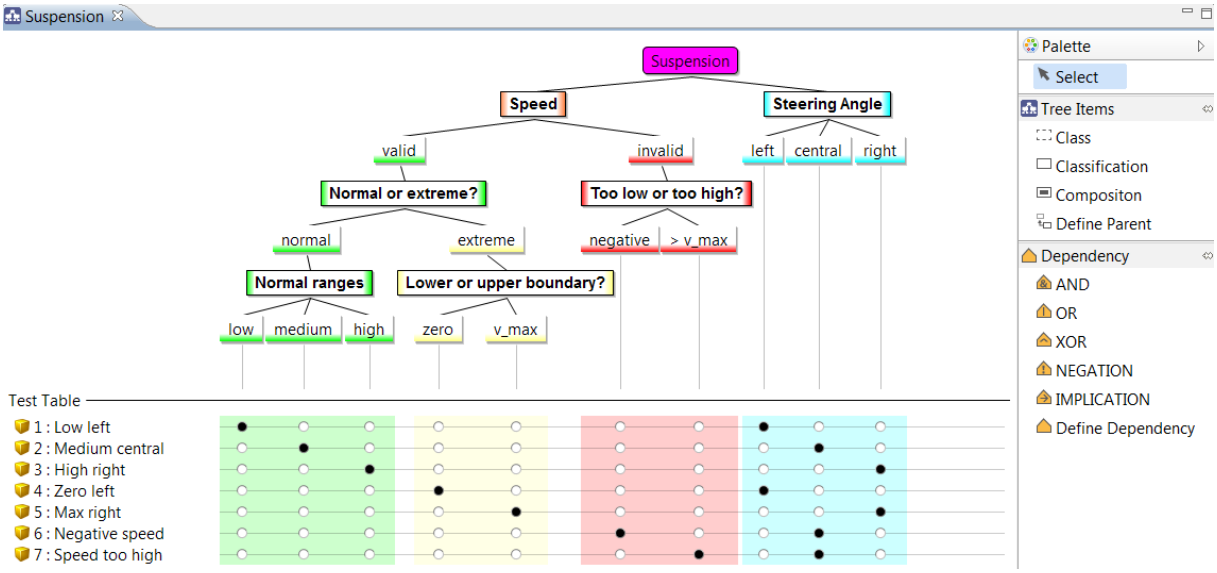

Fig. 1: The new Classification Tree Editor (CTE)

2 Script Editor Perspective

A new perspective allows editing of test data and user code in a script language. The contents can be stored in textual format. This provides a backup format alternative to TMB files; this allows comparing versions of tests using a diff tool.

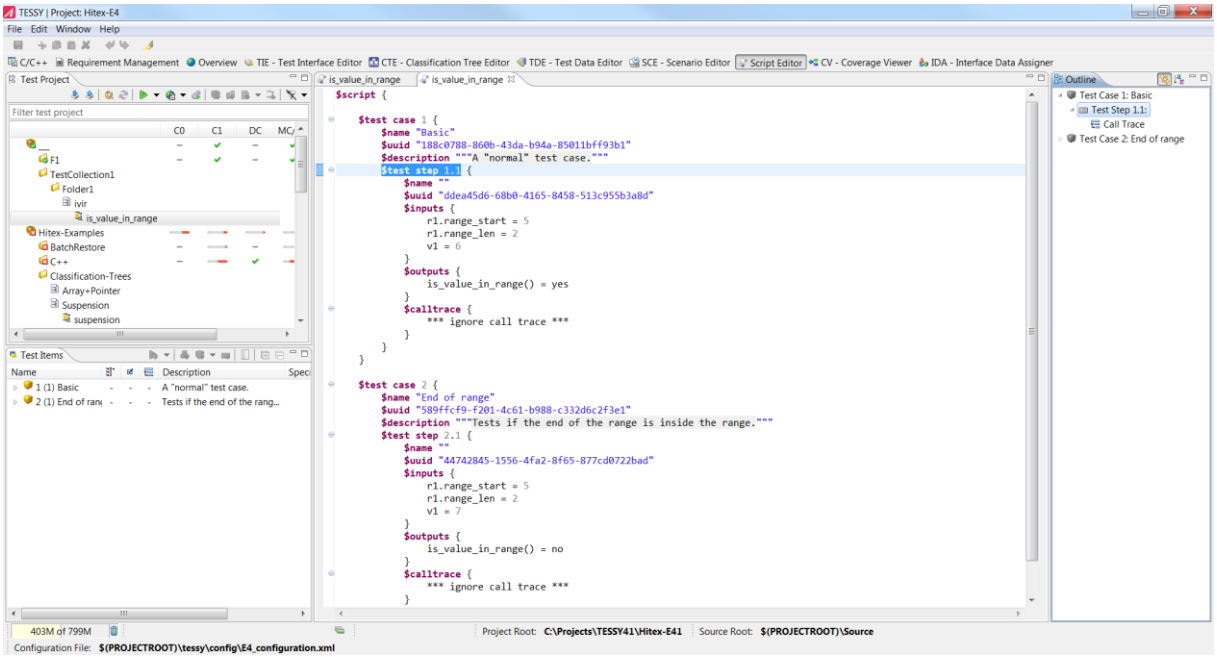

Fig. 2: Script Editor perspective

3 Fault Injection

TESSY can insert code in the test object which can be used to inject a fault. This mechanism can also be used to execute normally unreachable branches (e.g. the default case of a switch statement) to reach 100% branch coverage. The code of the fault injection is specified in the flow chart view of the test object.

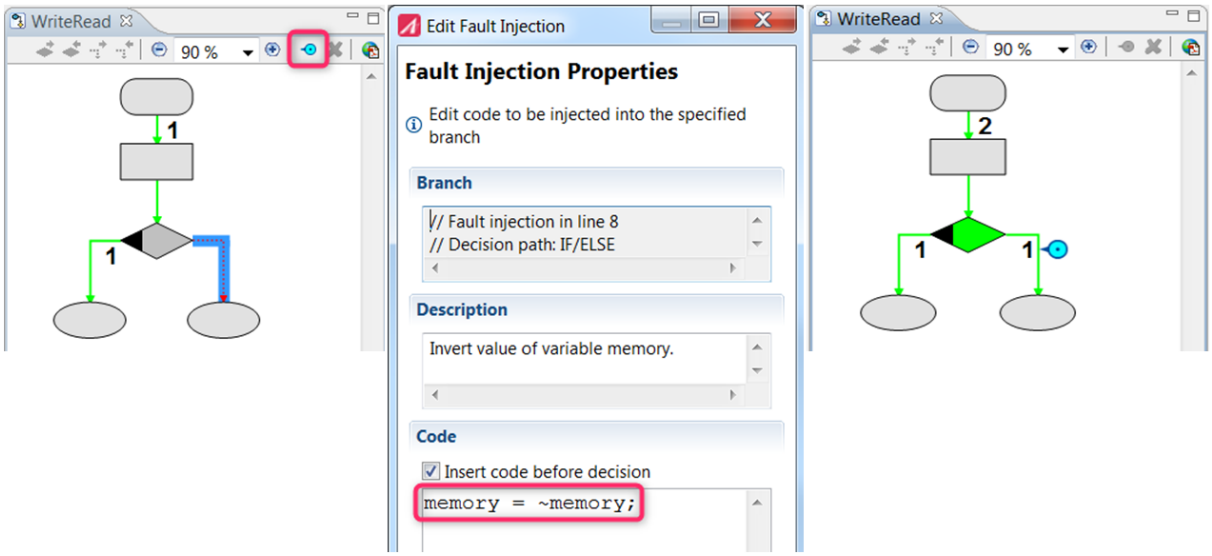

Fig. 3: Specifying a fault injection

4 Calculating the Cyclomatic Complexity

By static analysis of the test object, TESSY now calculates the cyclomatic complexity according to McCabe.

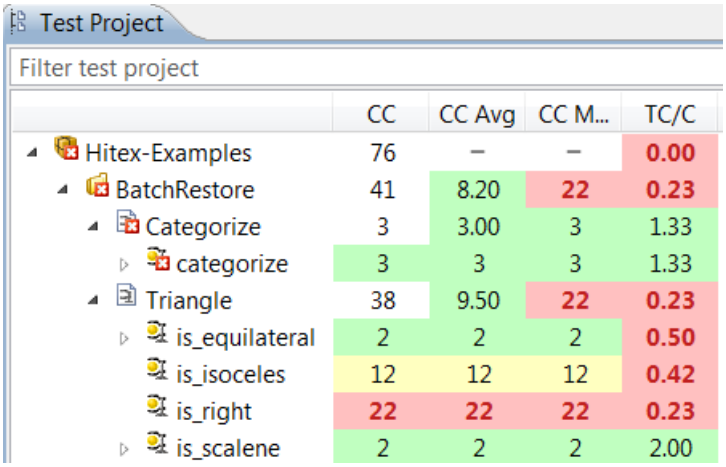

Fig. 4: TESSY displays the cyclomatic complexity

The colour code indicates if the warning level was exceeded (yellow) or if the error level was exceeded (red).

5 Expressions in the Test Data Editor

Expressions can be used in the Test Data Editor. Currently the operands can be numbers, enum constants and #defines.

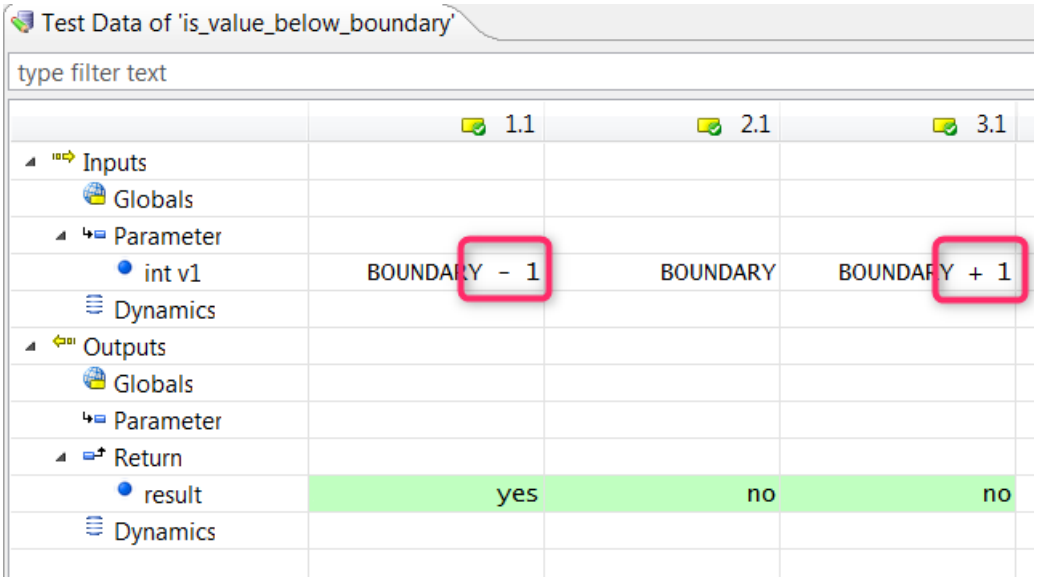

Fig. 5: TESSY can now calculate test data

6 TESSY Hardware Adapter interface (THAI)

TESSY can write (stimulate) and read hardware I/O signals during unit test execution by controlling user-supplied external hardware. This extends TESSY to a kind of Hardware-in-the-loop(HIL) system. Also time measurement is possible under certain conditions.

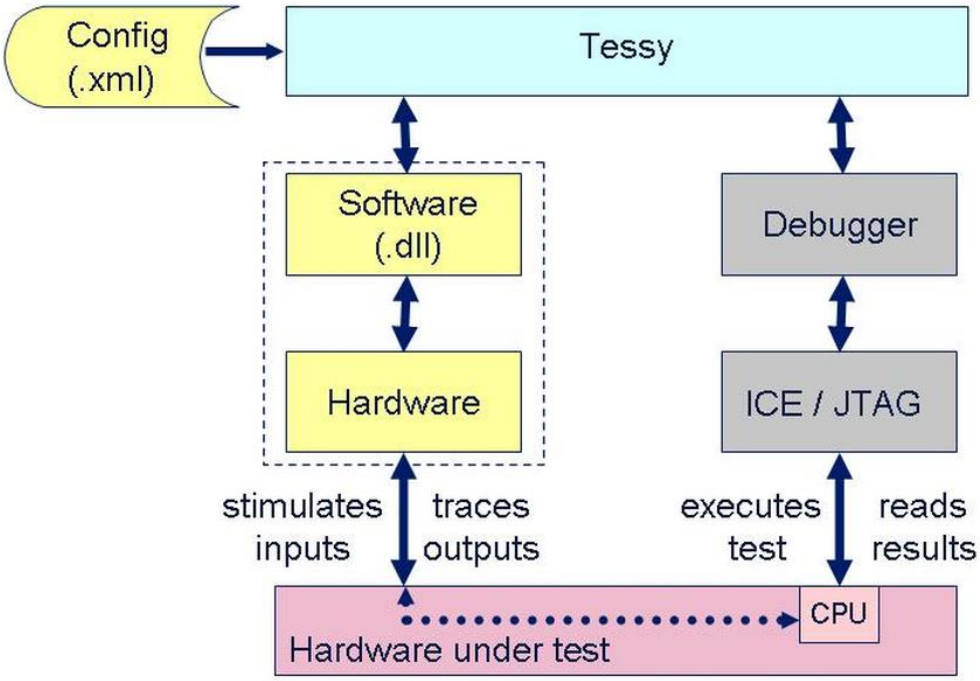

Fig. 6: TESSY can be extended to a HIL system

7 The Author

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Any comments or questions to this document are welcome.