News ECU-TEST 6.0
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TraceTronic GmbH

Dresden, November 2014
News ECU-TEST 6.0

Overview

- Pre-/PostCondition
- Multi-Language
- Project Generator
- External Package Library
- Filter in Project

- Workspace Explorer
- Abdication of Perspectives
- Consistent Look & Feel

- dSPACE Release 2014A
- ETAS LABCAR Operator
- Vector CANape MDF4

Methodology

GUI & Usability

Tooling
Methodology
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Methodology

Test case Package with Pre-/PostCondition

- Allows the clean pre- and post-processing of a test case
  - Similar to SetUp/TearDown in xUnit frameworks
  - PostCondition is always performed
- Efficient abort of test cases
Methodology

Multiple External Package Libraries
- It’s possible to add additional package libraries beside the packages of the current workspace.

Filter of Packages within Projects
- It’s possible to deactivate Packages inside a project on the basis of their attributes.
Methodology

Project Generator
- Provides the possibility to generate subprojects with package references, sets of parameter and changes of configuration

Separate Setting of the Language of Test cases
- Language of Test cases is independent of the tool language
- Improved assistance for translation
GUI & Usability
GUI & Usability

- Abdication of Perspectives
  - Administration, editing and usage of all files without change of perspectives
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GUI & Usability

- Workspace Explorer
  - Display of all files in the workspace
  - Display attributes of packages
  - Optimizations of performance
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Tooling
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Tooling

- dSPACE Release 2014A
  - ControlDesk 5.2 incl. application port
  - Real Time Testing 2.3
  - A lot of additional enhancements and improvements
- ETAS LABCAR Operator
  - New SMF-Model-Port
  - Support of signal recording
- Vector CANape 13
  - Recording and analysis of MDF 4.0/4.1
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Additional Highlights
Additional Highlights

- New License Mechanism
  - Floating
  - Dongle
  - Roaming

- Optimizations of performance
  - Workspace Explorer
  - Caching of models
  - Generation of big reports
  - Search of packages
Trace Analysis in ECU-TEST 6.0
Trace Analysis in ECU-TEST 6.0

Dresden, November 2014
Overview

- Plots & Reports
- Physical units
- Signal mapping

Methodology

- Simple analysis with TriggeredCheck
- Timing Diagrams

Specification

- MDF4
- Optimized MDF3
- TTL FlexRay

Trace Formats
Trace Analysis in ECU-TEST 6.0

Methodology
Plots & Reports

Flexible report of trace steps
- Ranges and spots in colored tabular overview
- Additional details displayed in flexible tables

<table>
<thead>
<tr>
<th>Result</th>
<th>Name</th>
<th>Generic signals</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAILED</td>
<td>Trace analysis 1 (Job_1)</td>
<td>IN: T15_st,APP_r,APP_stKD -- OUT: TriggerPoints</td>
</tr>
</tbody>
</table>

3 activations: 2 SUCCESS, 1 FAILED, 0 INCONCLUSIVE

<table>
<thead>
<tr>
<th>Zeit</th>
<th>Ergebnis</th>
<th>Nachricht</th>
</tr>
</thead>
<tbody>
<tr>
<td>1462.375766 - 1468.175959</td>
<td>SUCCESS</td>
<td>Check 1: Check condition was always True</td>
</tr>
<tr>
<td>1462.375766 - 1468.175959</td>
<td>SUCCESS</td>
<td>Check Condition = True</td>
</tr>
<tr>
<td>1789.250103 - 1795.849273</td>
<td>SUCCESS</td>
<td>Check 2: Check condition was always True</td>
</tr>
<tr>
<td>1789.250103 - 1795.849273</td>
<td>SUCCESS</td>
<td>Check Condition = True</td>
</tr>
<tr>
<td>1851.843354 - 1868.843519</td>
<td>FAILED</td>
<td>Check 3</td>
</tr>
<tr>
<td>1851.843354 - 1868.788459</td>
<td>SUCCESS</td>
<td>Check Condition = True</td>
</tr>
<tr>
<td>1868.798889</td>
<td>FAILED</td>
<td>First violation of check condition</td>
</tr>
<tr>
<td>1868.798889 - 1868.843519</td>
<td>FAILED</td>
<td>Check Condition = False</td>
</tr>
</tbody>
</table>
Plots & Reports

Colored ranges in overview and detail plots
Plots & Reports

Fine-grained and adjustable details filter for quickly showing and hiding details from view
Plots & Reports

Additional enhancements

- Default number of spots to be listed in Report:
  - Increased to 100
- Default value interpolation for plotted signals:
  - Now stepwise instead of linear interpolation
- Optimized labeling of axes
Physical Units

Selection of physical units within trace steps
Conversion of units happens automatically
Signal Mapping

Signals can be analyzed in multiple physical units at the same time
Signals can be analyzed in raw and physical unit at the same time
Mapping multiple analysis signals to one and the same trace
signal is supported
Trace Analysis in ECU-TEST 6.0

Specification
Simple Analysis with TriggeredCheck

New trace step template for quickly creating simple analyses
Timing Diagrams

Mathematical expressions in timing constraints supported:

Signal

\( \leq 0.5 \)  
(1, ...)  

[0.5 - tolerance, 0.5 + tolerance]

\( > 0.5 \)  
(1, ...)  

\( \leq 0.5 \)  
(1, ...)  

[tracetronic logo]
Trace Analysis in ECU-TEST 6.0

File Formats
File Format MDF 4

- Basic support
- Versions:
  - MDF 4.0
  - MDF 4.1 (incl. compressed data)
- Supported Signal-Types:
  - Measurement and calibration labels with CANape
  - Signal from CAN-, FlexRay- and LIN-Bus with CANape
  - Basic support of Signals from Ethernet-Bus with CANape
File Formats

- MDF-3:
  - Optimizations of performance
  - Separation of CAN, FlexRay and LIN in CANape MDFs
  - Synchronized merge of MDF files
- TTL:
  - Analysis of signals from FlexRay
- Raw data (ASC, BLF, TTL):
  - Support of frames with multiple frame triggerings
- All formats: Files are released automatically after tests have finished
Additional Highlights
Usability

Order of signals is adjustable
Usability

Possibility of customer designed parameterization dialogs for trace steps
Usability

Additional enhancements

- Windows explorer can be opened via context menu
- Multi-Signal Drag&Drop from mapping pane to signal recording pane
- Sorting of signals within the search dialog