

EXAM Test Case Generator

Generating test cases automatically



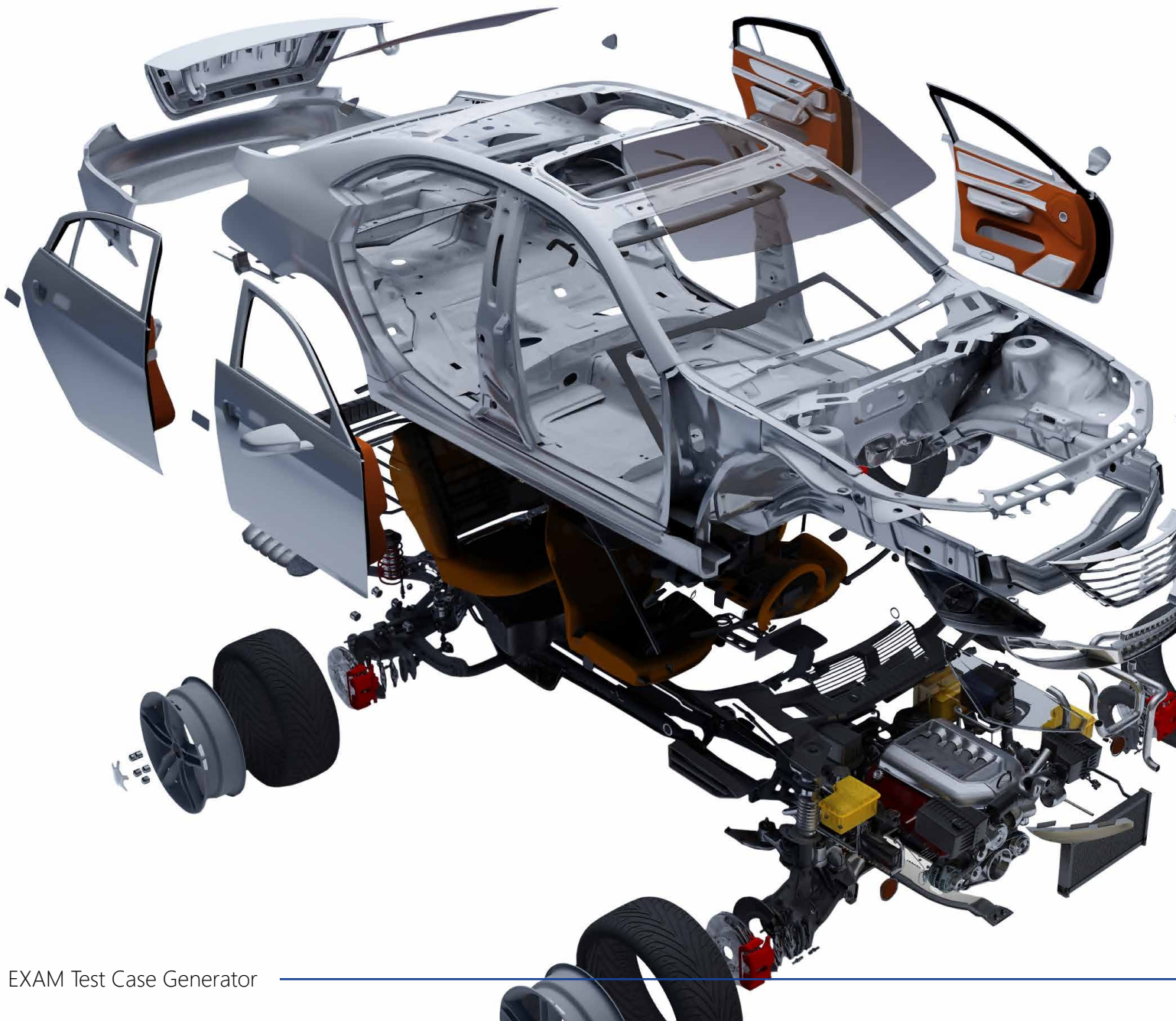
- » Higher quality thanks to better test coverage
- » Improved efficiency due to automatic test case generation
- » Better comparability thanks to uniform test specifications

EXAM Test Case Generator (TCG)

Engineers are usually implementing test cases for electronic control units (ECU) separately and manually in an automation tool. The Test Case Generator (TCG) from MicroNova automates this process, and increases the efficiency of test case creation many times over.

Test specifications are used as the basis for this. These are generally not standardized, which makes it costlier to maintain the test cases. Such a manual approach is time-consuming and prone to error, especially as requirements are changing at increasingly shorter intervals due to the rapid pace of development.

The EXAM Test Case Generator creates „TestCases“ in the test automation solution EXAM completely automatically from the test specifications. This is based on a uniform and clearly structured method, which substantially reduces the maintenance costs for the test cases and improves traceability, comparability and reproducibility. Advantages that benefit companies from all sectors in ECU and software testing. The solution offers considerable savings potential in terms of time, effort and costs – while at the same time increasing quality and test coverage.



Advantages of the Test Case Generator



Efficiency and time savings

The Test Case Generator from MicroNova automates the process of creating test cases, thereby increasing efficiency in safeguarding electronic control units many times over. More results are available more quickly.



Quality assurance

Using the TCG for all test runs allows their results to be checked uniformly, and their progression to be reliably tracked. Standardizing test specifications will ensure consistently high quality in the future.



Flexibility and performance

This approach allows test departments to respond quickly to the rocketing rate of change in functional development.



Simple traceability

It is sufficient to check the test specification. An additional review of the implementation is no longer necessary.



Optimum resource utilization

Thanks to automation, test engineers can spend more time on particularly complex cases.



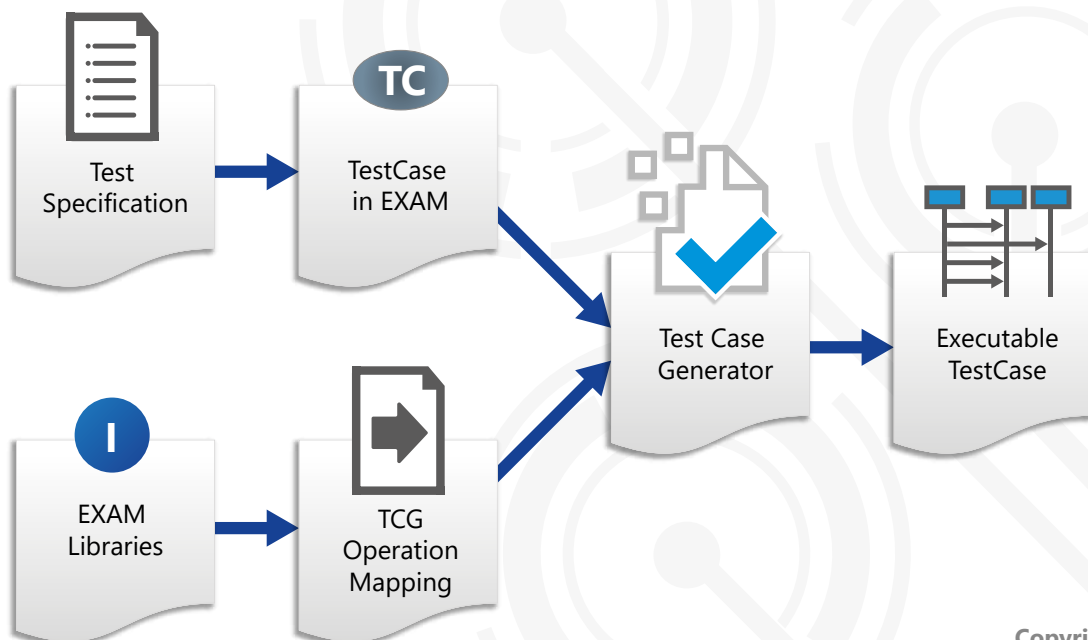
Quick commissioning with low costs

The TCG can be seamlessly integrated into EXAM, so no additional and cost-intensive interfaces are required.



How it works

- » Central tool: The Test Case Generator interprets the test specifications as a sequence of commands. Mapping these commands to EXAM operations automatically generates the test cases. This significantly reduces the time and effort required for the implementation, particularly for testing during development.
- » Commands are mapped centrally in the EXAM model. The mapping provides test specifiers with clear guidelines for new „TestSpecs“, while existing ones can be adapted with minimal effort. The TCG then creates a full, executable test case as a sequence diagram from the user’s technical specifications in just a few seconds.
- » The Test Case Generator uses synchronized test cases from a specifications tool as the basis. Test procedures and parameters are maintained outside EXAM in the requirements management program. Changes are made centrally in the respective EXAM library or the associated “TestSpec”. Once the changes are made, they can then be easily applied to all test cases.
- » The TCG forms a functional enhancement to EXAM: It works as a plug-in and supports many comfort functions in EXAM, since it is based on well-known concepts such as „ShortNames“ or „TestCaseStates“.



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