

Solution for Evaluation, Assessment and Reporting of Simulation and Test Result Data

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1 Introduction

Today, product development processes are usually supported by physical and virtual tests. The amount of test and result data increase continuous due to higher complexity of the products and an increasing number of legal and consumer requirements. To enable the development engineer the handling of that increasing complexity the implementation of efficient development tools as well as the standardization and automatization of test and simulation processes becomes more relevant. In both areas, SCALE provides powerful solutions over the entire process chain. In that contribution, two modular software components in that field should be introduced.

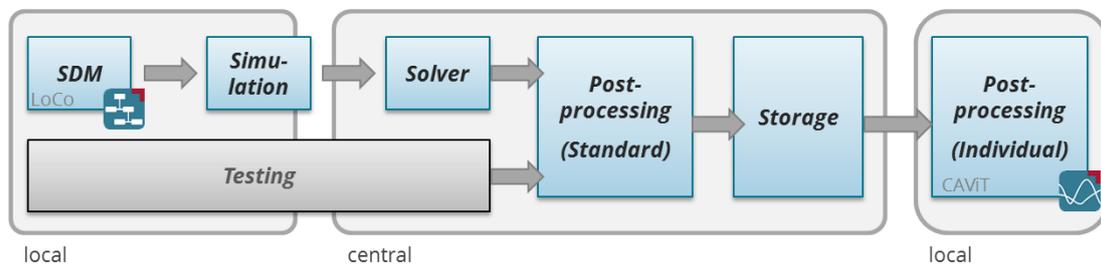


Fig.1: Test and Simulation Data Process (schematic)

2 Result Extraction and Modification

The first part of the presentation is dedicated to the extraction and processing of test result data. For this purpose a general environment, which allows the description of the relevant result components, is provided. With the presented approach it is possible to extract similar results from different solvers with identical directives. Furthermore the modification of time history channels and the computation of scalar values for simulation and physical test become possible with identical methods. In the presentation the idea, implementation and application of this solution is introduced in detail.

3 Reporting

Results of simulation and physical tests are usually reported on slides or other documents. For this task a solution is introduced that enables the automated generation and description of pages in a very general manner. By the use of this general approach the solution becomes independent on the page renderer and enables a flexible adaption on the environment condition and special needs of the customer. In the presentation, the reporting module is illustrated with the aid of some relevant examples of application.

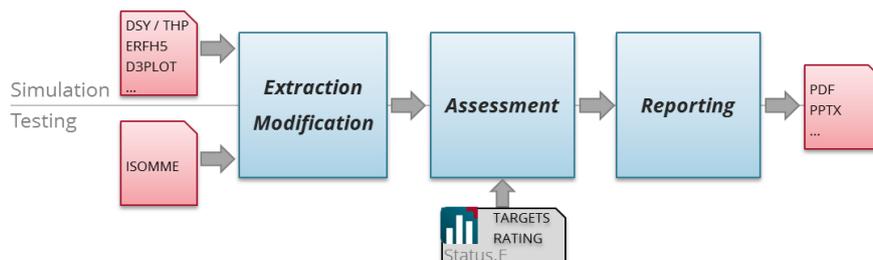


Fig.2: Process components for simulation and test data processing, assessment and reporting

The screenshot displays the CAVIT - V2 software interface. The main window shows a table of test results with columns for Tag, Variante, Bewertung, and various body parts (Kopf, Hals, Schulter, Rippen). A context menu is open over the table, listing actions like 'Werkzeuge...', 'Kennzeichnen als...', 'Bewerten', 'Auswahl neu laden...', 'Ausblenden...', and 'Zu Ordner hinzufügen...'. To the right, three report types are shown: [PDF/PPTs Reports], [Video Overlay] (using Animotor software), and [docx Reports].

Tag	Variante	Bewertung	Kopf	Hals	Schulter	Rippen
Test_5258						
Test_5497						
377			69.0	314.9	18.6	40.2
377			222.4		40.5	
Test_5244			244.0	811.6	654.5	31.1
Test_5245						
Test_5283						
Test_5269						
Test_5246			521.5		28.4	1.7
Test_5265						
Test_5247					24.5	
Test_5282						
Test_5264						
Test_5282					25.1	562.1
377					30.1	
Test_5281						
Test_5274						
Test_5250					19.2	
Test_5251					1.2	
Test_5270						
Test_5252			429.2	1276.1	1227.0	51.4
Test_5253						
377			23.0		314.8	15.9

Fig.3: On the fly generation of reports based on selected simulation and test result data