Data Management in the Development of Automated Driving Functions

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The importance of data management systems in vehicle development is increasing because the systematic provision of content is crucial for efficient and agile development processes. In order to meet new demands, 3F, together with PDTec and IPG Automotive, is implementing a data management solution for virtual test driving on a global base.

MOVING TOWARD VIRTUAL DEVELOPMENT

Digitalization in general as well as automated driving in particular pose great challenges for the automotive industry. Moving toward an increase in virtual development is a crucial factor for success that requires new methods and infrastructures at the same time. Automated vehicles are complex and safety-relevant systems for which an entire dimension of scenarios and use cases – concerning automated driving – has to be simulated and verified in a reliable manner. Analyses, error detection and root-cause identification pose new challenges as well.

In a nutshell, the number of people working regularly with simulation programs is growing continuously, and workflows need to be integrated seamlessly into a valuable core superordinate development processes. A systematic management and, as intelligent, distributed use of models, execution data and test scenarios are becoming a crucial factor. The same applies to the integration of extra data into computing infrastructures. To this end and further requirements, 3F has implemented a data management solution for virtual test driving with the support from PDTec and IPG Automotive. The following article is going to elaborate on this solution.

AREAS OF DATA MANAGEMENT

A detailed enterprise Simulation Data Management (SDM) covers the entire CAE scope, from providing data from Product Data Management (PDM) systems like CAD systems or comprehensive