IMPLEMENTATION OF A SIMULATION DATA MANAGEMENT SYSTEM AT CEVT

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ABSTRACT
In the beginning the CAE data management and the CAE processes could be maintained by the CAE engineers themselves. The best practices were easy to share among just a handful of people and new employees could be trained on-the-fly. But, with such an exceptional growth rate in terms of number of employees, these processes soon generated a great workload for maintenance and training, and it also produces a great number of data on a daily basis. The constant strive to reduce the lead time for the CAE process was pushing the limits on what is possible to quality assure on a manual basis. The need for system support within CAE data management was found crucial.

CEVT conducted a study on the lead time of the CAE-process at that time. The study concluded that too much time was spend in the modelling phase of the CAE process and less on analyzing the results and developing countermeasure proposals.

In this context, BETA CAE System's SPDRM (Simulation Process Data and Resources Management) was selected as a process and data management system for CAE. Process-wise, SPDRM had to establish a basic infrastructure for the CAE-process with integrated process chains from geometry to reporting, offering flexible integration of various CAE-applications used in the CAE-process. From the data-perspective, SPDRM had to store data in a structured, efficient and quick-accessible way. Furthermore, the semi-automatic processes based on the best practice to give direct support for the CAE engineer e.g. during modelling of a sub-system.

This paper describes the first implementation of the SPDRM system for process and data management for some simulations disciplines e.g. Fuel Economy, Safety and NVH, starting from the requirements, going through the implementation steps and concluding with the description of the deliverables: A unified platform for the management of data and harmonized and standardized processes with more automated tasks, where reusability of partial models across the simulation disciplines is natural. All-in-all maximizing the CAE teams capability of delivering fast results - still maintaining high quality.