

CAE MODEL BUILD-UP IN COLLABORATION WITH EXTERNAL SUPPLIERS NOT HAVING DIRECT ACCESS TO THE ENTERPRISE SDM ENVIRONMENT

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ABSTRACT –

Real life CAE activities are seldom confined within the walls of an Enterprise. Equally to the people working in the same department, external Suppliers play a key role to the delivery of specific products and to the completion of a CAE workflow. It is therefore necessary to establish a standard way to communicate simulation data to/from a Supplier and to integrate a Supplier's work into the Enterprise SDM environment.

By utilizing an example of a full-vehicle model build-up process (that also includes trim information), this work presents an efficient and versatile approach to the problem of distributing the work to a number of Suppliers situated off-site. Furthermore, it demonstrates how this same approach is used by the in-house engineers to finalize the simulation tasks by interacting directly with the SDM environment. It also considers that Suppliers have no direct access to the main SDM environment, so acquisition of requirements related to the modeling process may be significantly delayed or not delivered at all. These facts impose additional constraints to the integration of the Supplier's deliverables into the enterprise SDM:

- the volume of data communicated to/from the Supplier should be kept at a minimum
- data attributes may be missing or incomplete
- Supplier should start working with the data as soon as possible
- Supplier (or the in-house engineer) would have to populate the correct data attributes at a later stage
- accommodation of data updates should be based on a "delta" approach to minimize the size of the exchanged data
- the applications used by the Supplier are often not under the control of the Enterprise

Siemens PLM Software and BETA CAE Systems S.A. have worked together to develop a methodology that efficiently handles the above use-case, by utilizing the open PLM XML protocol to facilitate the communication of information and data between an Enterprise and its Suppliers.
