

QUALITY MANAGEMENT OF CAE DATA WITHIN A SPDM ENVIRONMENT

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ABSTRACT

CAE data quality plays a key role in the performance of the complete simulation activity. High quality of data increases the confidence of CAE analysts in the results of the simulation and in the CAE process as a whole. Given that the evaluation of the simulation results and the subsequent decision making are only the last steps of a complicated, multi-stage process that is usually distributed among different engineering teams, quality issues at any step of this process may render the results unreliable. The first question that arises is: What does it take in order to ensure a minimum standard of data quality?

Today, SPDM systems gain more and more ground among engineering teams, especially in big organizations. We move from the era of “SPDM as a data repository” towards the era of “SPDM as the reference point for CAE”. This evolution raises the expectations for data quality management too. Now that the data are stored in an organized manner and data relationships can be traced, how easy is it to identify the impact of an error in the data stored in the repository? And what is the process that should be triggered after the detection of a problem in order to make sure that the root cause of the problem is discovered and that the same problem won’t occur again in a different data set?

This paper will discuss how SPDRM, the Simulation Process, Data and Resources Manager of BETA CAE Systems, responds to these questions with its solutions for both the prevention and the treatment and management of quality issues. First, with its powerful workflow management engine, SPDRM enables the capturing of the right “recipe” for the data preparation at the desired level of detail, including the right check-points for the verification of the quality of the data in hand at various steps of the process. Second, with its inbuilt Issue Management console, essentially it integrates an Issue Tracking tool with the SPDM environment, allowing the reporting, analysis and progress monitoring of issues in the context of the CAE activities.