



DRIVEN BY PERFORMANCE - MAHLE OPTIMIZES INTERNAL RELEASE PROCESSES IN R&D

The automotive supplier MAHLE Filtersysteme GmbH, a subsidiary of the globally operating MAHLE Group, aims to stay true to the motto of “zero-error quality planning“. To take a step closer towards this objective, the company decided to automate and standardize the release processes in their R&D sector.

The underlying idea was to have the JT conversion of released 3D CAD models – from any of a variety of sources – automatically triggered from SAP, and to then have the result made available to all involved parties via the SAP document management system.

► THE STARTING SITUATION

The conversion solution previously used by MAHLE Filtersysteme was unsatisfactory, and the problems couldn't be fixed. So Hans-Peter Roitsch, PLM-Manager at MAHLE Filtersysteme, and his colleague Heinrich Wickom, IT-Manager at MAHLE International, went in search for an alternative. Their pot of gold was a Right Hemisphere Deep Server integrated into SAP by CENIT.

The basic requirement was the conversion of CATIA V5 and Pro/Engineer models.

This conversion was to be triggered automatically via SAP following release of the design drawing. The JT file had to then be filed with the 3D model as a SAP document.

► IMPLEMENTATION

The prerequisites for project success were defined in minute detail: SAP was to be made DMU (digital mock-up) capable. The DMU viewing was supposed to be carried out dynamically. This means that assemblies are dynamically generated according to the assigned CAD models. A special challenge were the released legacy

Hemisphere Deep View Server along with DEEP INTEGRATION, CENIT's SAP-certified integration software for the server.

The MAHLE Filtersysteme project was implemented by the CENIT specialists within just a few weeks, and so the system quickly became operational.

► BENEFITS AND OTHER OPTIONS

The advantages of the strategy chosen by MAHLE Filtersysteme are obvious: In addition to the “simple“ JT conversion of CAD models, the server can also be used

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**Hans-Peter Roitsch
PLM-Manager**

3D models, as no transformation matrices were available in SAP at that point.

Together with MAHLE, the Stuttgart-based consulting and software provider CENIT solved this task in a separate development project over a 15-day period. At two initial MAHLE locations, in Stuttgart and in St. Michael (Austria), the IT experts then installed the Right

to manage more processes automatically – for instance, conversion processes that delete unneeded information from the CAD models. And other information, such as metadata from SAP, can be added at any time. The Deep View Server is able to read in more than 80 formats and can generate more than 40, including Right Hemisphere's own format. This can be

MAHLE: DRIVEN BY PERFORMANCE

displayed and further processed using the Deep Exploration Author System or the Right Hemisphere Deep View, which recently became SAP's standard viewer. Other established formats are JT – the preferred MAHLE Filtersysteme option – or the intelligent 3D PDF Document.

For PLM-Manager Hans-Peter Roitsch, one of the most significant changes is the automatic flow of processes: "The acceptance of the solution is dependent on the fact that no additional engineering work is required in terms of the JT generation. This method increases simultaneously the willingness to release 3D models, as now 3D data is available for downstream processes at an early stage (view + measure). The communication loops for the cross-department release processes have become a lot simpler." For instance, JT conversion now runs automatically and no longer has to be triggered manually by the respective engineer. For MAHLE Filtersysteme, this optimization is right along the lines of the PLM solution: releases are conducted almost in real time and all participants obtain access to a format that can be even be evaluated without a CAD license.

► STATUS AND OUTLOOK

MAHLE Filtersysteme is highly satisfied with the solution implemented by CENIT. As Hans-Peter Roitsch explains: "Following our successful cooperation with CENIT, we are now considering using the conversion process for our Unigraphics models too." Heinrich Wickom adds: "We have also started first projects to use the SAP CAD direct integration, including JT conversion, globally."

MAHLE's managers are aware that such modular state-of-the-art technology can be used to supply all departments with the 3D/2D models in the formats they need, and along with important metadata. This saves the R&D departments from having to spend a great deal of time and work on redrafting of design drawings so that they can be used by non-design staff in departments like technical documentation, service and maintenance, as well as purchasing, marketing and sales.

Heinrich Wickom knows the benefits for MAHLE: "Of course we are very happy that thanks to CENIT, we were able to quickly turn a problem into a solution. The new setup brings us a great deal closer to the quality optimization that we target in our company strategy."

► ABOUT MAHLE

As the leading development partner of the automotive and engine industry worldwide, MAHLE offers its customers unique systems competence in the areas of internal combustion engines and engine peripherals. MAHLE is among the top 3 suppliers globally for piston systems, cylinder components, valve train systems,

air management systems and liquid management systems. Our circle of customers includes all renowned combustion engine manufacturers.

For more than 80 years, MAHLE has played a crucial role in advancing the development of vehicle and engine technology and is continuously setting new standards. Driven by performance – MAHLE is known for exceptional enthusiasm for performance, precision, perfection and cutting-edge innovations.

MAHLE has a local presence in all important world markets. The Group has approximately 48,000 dedicated employees in 110 production plants and eight research and development centers. Worldwide, more than 2,500 development engineers and technicians work as partners for our customers on forward-thinking concepts, products and systems focused on the continuous development of the combustion engine. In 2007, the MAHLE Group generated sales in excess of EUR 5 billion (USD 7.5 billion), positioning the company among the top 30 automotive suppliers globally.

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Heinrich Wickom
IT-Manager



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