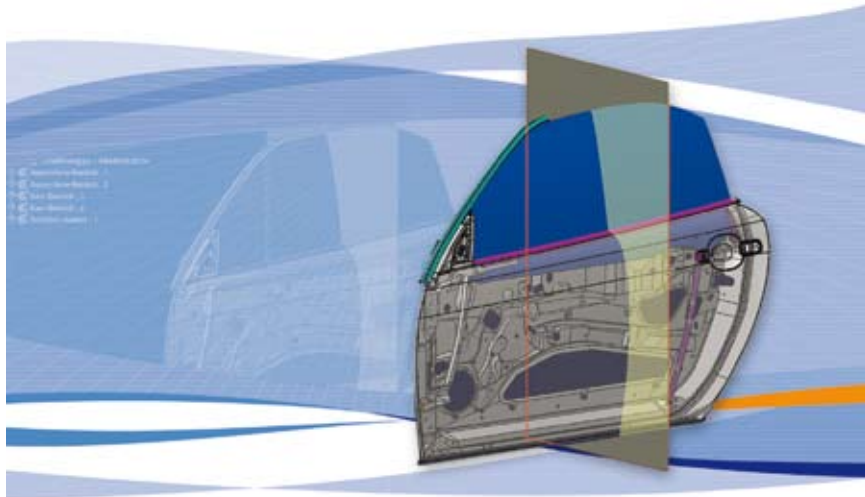**IBM**

Bertrandt reduces Body-in-White design time with CATIA V5 and ENOVIA

> *"From my point of view, for Body-in-White engineering, CATIA V5 is the best system on the market and the optimum solution for the majority of Bertrandt's projects."*

Andreas Hauser, Lead Engineer,
Bertrandt Technikum GmbH

Overview

■ **The Challenge**
To accommodate the ever increasing number of vehicle variants and shorter development times, Bertrandt needed to standardise its processes and to integrate its resources

■ **The Solution**
To meet the platform requirements of its customers and partners and to streamline product development, Bertrandt began the migration from CATIA V4 to CATIA V5 in 2001

■ **The Benefit**
With CATIA V5, Betrandt has significantly reduced the Body-in-White design time for doors and closures, simplified how modifications are made and minimised incompatibilities.

A changing industry demands new processes

Bertrandt is one of the leading engineering service providers to the international automotive industry. With 3,000 employees at 19 sites throughout Europe and one in the United States, the company works closely with its original equipment manufacturer (OEM) customers to provide customised solutions ranging from individual components to modules and even complete vehicle derivatives.

To accommodate the ever increasing number of vehicle variants and the pressure for shorter development times, Bertrandt has focused on optimising its end-to-end development processes, and thereby extending the range of services available to its customers.

For the past three years, Bertrandt has been called upon by its customers to perform complete vehicle design. "More customers are requesting complete car design from Bertrandt and this includes all process, design and development areas, even assembly and the production of prototypes," said Bernhard Zechmann, Manager CAx Application Strategy, Bertrandt AG.

Through an internal initiative named b.Xcellent, Bertrandt is developing project-based interdisciplinary solutions for integrated vehicle development. To support this initiative, the company needed a PLM architecture to support all the engineering processes required when designing a complete vehicle.

CATIA

ENOVIA

bertrandt

CATIA V5 and ENOVIA form the backbone for a new PLM architecture

Bertrandt had begun the migration of its more than 600 CATIA V4 seats to CATIA V5 in 2001, allowing it to maintain a common PLM platform and meet the design requirements of many of its customers. The company knew that CATIA V5's advanced capabilities would help it to achieve its process, collaboration and development goals.

Bertrandt also selected ENOVIA Life Cycle Applications (LCA) to integrate its existing systems and effectively handle CATIA V5 data.

"Bertrandt selected ENOVIA because it provides the capabilities needed to transform our business and realise our strategy for enabling the Bertrandt Engineering Network regarding organisation, processes and technology," Mr Zechmann said.

Gaining development efficiencies with Body-in-White

Body engineering is one key area Bertrandt has focused on to gain efficiencies in development. Bertrandt now relies on CATIA V5 for Body-in-White projects and is reaping the benefits.

"For example, for door design, we built an approach based on parameterised models, kinematics, Digital Mock-up (DMU) and all the advantages of CATIA V5," said Andreas Hauser, Lead Engineer, Bertrandt Technikum. "We were able to complete the concept study very quickly and CATIA V5 brought distinct advantages."

"By defining and using intelligent templates with validated design logic", Mr Hauser said, "CATIA V5 allows Bertrandt's designers to make faster and easier changes to designs."

Improving quality with CATIA V5

Bertrandt also uses DMU Navigator to verify design data for quality assurance. "We established a DMU process with our own tools based on the capabilities of the DMU Navigator that helps us to avoid mistakes and recognise problems at an early stage of development," Mr Hauser said.

With Body-in-White templates and customised features for parts such as door handles and hinges, CATIA V5 allows Bertrandt to reuse existing product data and corporate knowledge to streamline development and improve quality.

CATIA V5 becomes solution of choice

Through its own CATIA Competence Centre, which develops experience-based training materials and capitalises on company best practices, Bertrandt has trained about 180 of its engineers to use CATIA V5 until 2004. Bertrandt's Competence Centre will continue to train the rest of its more than 800 engineers as well as customers and partners.

According to Mr Zechmann, 80 percent of Bertrandt's new development projects use CATIA V5. He predicts that most of the company's OEM customers will have migrated completely to CATIA V5 by the end of 2005 for new car program development.

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