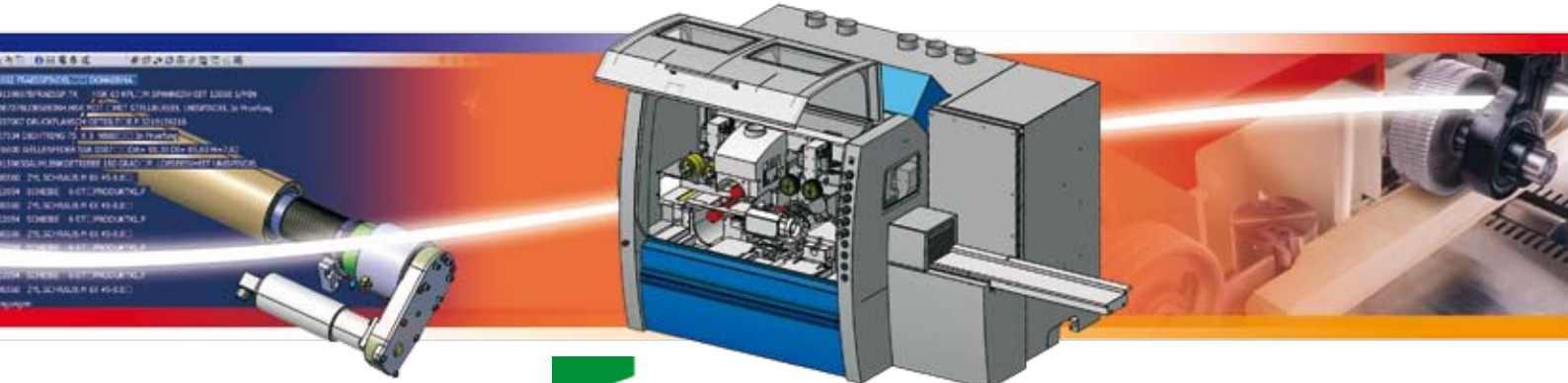


# Weinig

Enhanced virtual product engineering with CATIA V5



## Overview

### ■ Challenge

*German wood-working machine builder Weinig wanted to reduce production times, increase the quality of technical documents, implement virtual collision analysis, and avoid routine product development activities.*

### ■ Solution

*In the transition from 2D to 3D design, CATIA V5 out distanced its competitors with its logical organization and intuitive user interface.*

### ■ Benefits

*Weinig uses a full virtual development approach with CATIA V5 that has allowed it perform concurrent engineering and pursue automation through open interfaces to other systems, protecting its investment.*



“After extensive market research for a complete and intuitive solution, we benchmarked four CAD systems. CATIA V5 emerged as the most innovative solution for our needs.”

Alexander Walter, Information systems department head, Michael Weinig AG

### The need for an innovative 3D engineering solution

From pencils, piano keyboards and furniture, to flooring, windows and complete houses, almost all types of wood products are processed with machines manufactured by the Weinig Group. Weinig's six companies operate in more than 100 countries and possess extensive knowledge of the complex solid wood process chain, from dry wood to the finished product.

One subsidiary, Michael Weinig AG, from the Swabian town of Tauberbischofsheim, employs 1,100 people and produces equipment such as beading and fluting machines, tools and grinders, window processing and profile centers and complete production lines for solid wood machining. It also provides services, such as fast delivery of spare parts worldwide.

In the late 1990s, Weinig switched from 2D to 3D CAD to reduce production cycle time, increase the quality of technical documentation, allow for the analysis of

collisions in a virtual environment and free employees from routine activities. Hardware costs also were reduced with the migration from a UNIX-based environment to a Windows platform.

Weinig sought an innovative CAD system with a fully-developed methodical approach that could process complex assembly groups. Open interfaces such as Visual Basic and CAT Script afford considerable automation and optimize Weinig's processes through the ability to replicate routine functions. Weinig also needed an intelligent user interface that was intuitive and easy for its designers. In addition, Weinig wanted to protect its investment by choosing a leading global provider of product lifecycle management solutions.

### Development of 3D CAD

In December 2000, Weinig launched a project to integrate CATIA in its product development process and in May of the following year, Weinig installed the first five CATIA workstations for its design



operations. In 2003, all 50 CAD operators were trained to perform design activities using CATIA V5. The solution was then completely integrated into Weinig's in-house ERP solution, which manages all product data generated throughout its development process.

Since Weinig expects the percentage of custom made machines to increase over time, it wants to constantly improve the path from design to production. It is particularly important that the original data from Weinig's design phase be available during work preparation for the production process. Associating CATIA V5 with the ERP system is an important asset that helps Weinig, optimize their processes and increase process safety.

Communication between Weinig's ERP modules and CATIA V5 is accomplished using the neutral data format XML, making change management independent of new releases of either system. Since 2004, wood processing specialists have been planning all new product developments in 3D and since early 2005, all 2D data - approximately 150,000 designs - are transformed into 3D via the gradual migration of old data to CATIA V5. Today, all changes are completed in CATIA V5.

The staff at Weinig was pleasantly surprised at how quickly they were able to learn to use an advanced system like as CATIA V5. After only five days of training, specifically

tailored to Weinig's needs, designers were able to carry out complex tasks with CATIA V5.

### **Saving time and reducing costs**

Weinig's machine manufacturer in Baden-Württemberg found the cost savings generated by running on a Windows platform instead of UNIX especially advantageous. It also benefits from the automation of routine activities of the engineering process, such as adopting part assemblies as PPS-part lists. Concurrent engineering also saves Weinig designers and engineers considerable time throughout the product development process.

"We now have only one database for the design environment," explains Jochen Ganz, Product Organization manager, Michael Weinig AG. "Individual activities no longer have to be carried out sequentially. The various departments involved in a project can carry out their work simultaneously and with the same degree of knowledge."

The company also can create drawings for spare parts quickly and at less cost. Plus, thanks to improved documentation, customers are able to see what their machines will look like early in the design process. Today, Weinig has 58 CAD workstations installed not only at the Tauberbischofsheim site, but also in Illertissen (Bavaria) and in Sweden.

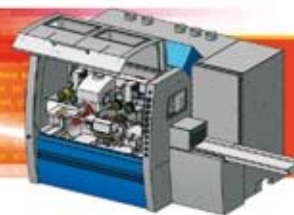


"With CATIA V5, the various departments involved in a project can carry out their work concurrently and with the same degree of knowledge."

Jochen Ganz, Product Organization Manager, Michael Weinig AG



**Dassault Systèmes**  
9, quai Marcel Dassault, BP310  
92156 Suresnes Cedex France  
Tel: 33 (1) 40 99 40 99



CATIA®, DELMIA®, ENOVIA® and SIMULIA® are registered trademarks of Dassault Systèmes or its subsidiaries in the US and/or other countries.

Images courtesy of Weinig

© Copyright Dassault Systèmes 2007.  
All Rights Reserved.

Ref: RF\_F\_03SGQ\_EN\_200703

The Dassault Systèmes home page can be found at [www.3ds.com](http://www.3ds.com)