

Customer Success Story



„In both projects XPLM met the tight schedules, demonstrated great experience and competence, both in the design and the implementation of our projects.“

Andreas Maahs
CAD / PLM Administration, FAULHABER

THE PROJECT

The process was divided into two subprojects. The first project integrated the Altium Designer ECAD system for PCB engineering in Teamcenter, which then made it possible to consolidate component management in a central SQL database in the second project. The Altium Designer and PLM databases are synchronized automatically.

THE CUSTOMER

FAULHABER is an independent, family-run group of companies, with headquarters in Schönaich, near Stuttgart, Germany, in one of the economically strongest and most important high-tech industrial regions in Europe.

Founded in 1947, FAULHABER today offers the most comprehensive portfolio of highly developed miniature and micro-drive technology available from a single source anywhere in the world. Based on this wide range of technology, Faulhaber designs drive solutions whose precision and reliability in tiny spaces is unparalleled. The main areas of application for these solutions include production automation and robotics, aerospace, optical systems, medicine and laboratory technology.

In addition to Germany, FAULHABER has other development and production sites in Switzerland, the USA, Romania and Hungary. There are also sales partners and subsidiaries in over 30 countries around the world. FAULHABER currently has a workforce of over 2.100.

BACKGROUND

Siemens Teamcenter is the primary PLM system used at Dr. Fritz Faulhaber GmbH & Co. KG. Although the MCAD systems Siemens NX and SolidWorks from Dassault Systèmes had already been integrated in Teamcenter, the Altium Designer data was managed manually using a file-based approach until 2014. In order to also optimize design management and library management of the circuit boards, the ECAD system was connected to Teamcenter using the direct integration tool Integrate2.

REQUIREMENTS

- Integrate2 should make the workflows simpler, more secure and more transparent.
- The automation of routine tasks should ease the workload on users.
- The output of engineering data as well as generation of data packages should take place automatically
- The database of parts should be maintained centrally in Teamcenter and be synchronized with the databases in the design and purchasing departments.

THE SOLUTION

After a detailed internal analysis of the current workflows, the FAULHABER electronics team designed what they considered an ideal process. The aim was to simplify and speed up the work performed by the electronics designers while eliminating potential sources of errors. Together with XPLM, the internal PLM team then checked the extent to which their ideas could be realized with integrate2, the direct integration tool in Altium Teamcenter. Because the interface was explicitly designed to reflect workflows in PCB design, only a small amount of adaptation was necessary.

THE DIRECT ECAD-PLM INTEGRATION TOOL INTEGRATE2 SHORTENS INNOVATION CYCLES

Questions such as “Which PCB belongs to which electric motor?”, “Which circuit diagram belongs to which layout?” or “What manufacturing data is valid?” have been consigned to history at FAULHABER since 2014, because since that time, ECAD Teamcenter’s direct integration tool has provided intelligent support for their engineering processes.

From the Altium Designer environment they are familiar with, they handle the entire product data management process, from data storage to change management through to release. In this process, integrate2 takes over control and steering functions. Not only it ensures that the data is stored correctly in the data model, it also checks whether the data is complete and/or plausible in the first place and compares BOMs with the relevant predecessor version.

Routines stored in Teamcenter link valid versions of related data and objects such as schematics, layouts and part lists to each other. The presumably final version triggers defined output processes, such as the conversion of native data into

a neutral format, the generation of BOMs for purchasing and the transfer of these to the ERP system, as well as the output of production data.

This allows relevant information to be communicated at an early stage, especially in the case of components that are difficult to procure. STEP files can be used to integrate equipment engineering into projects at an early stage.

Because integrate2 relieves electronics developers of time-consuming routine work and automates many processes, the team is able to complete their actual engineering work up to 80% faster., “Integrate2 has simplified our data storage considerably, which explains why the solution was quickly accepted by all the users. We were able to adapt the integration to our particular requirements to the greatest extent possible, which allows us to achieve an excellent representation of our miniature and microdrives in our system.” explains Thomas Schneider, PCB designer.


REDUCED COSTS THANKS TO CONSISTENT MATERIALS MANAGEMENT


In 2018, FAULHABER carried out a second project to implement uniform component management across all systems. As a result, the parts database is unadulterated and the components are systematically reused. This reduces product costs.


The components are now created and maintained centrally in Teamcenter. In this process, the variable part of the classifying article number is generated automatically, which rules out accidental duplicate assignment.

A routine regularly synchronizes the database with those of Altium Designer and ERP.

ADDED VALUE

 A brief introduction was sufficient to allow our entire team to use the Altium Teamcenter integration facility on their own.

 Depending on the permissions assigned to them, staff in all departments can access the product information in Teamcenter directly from all locations.

 Automated generation of our product parts lists in Teamcenter makes it easier for us to provide where-used information.

ABOUT XPLM

XPLM is a globally operating PLM solution provider specializing in integrating applications, processes, data and information for optimum cross-domain collaboration between engineers. With its unique portfolio, XPLM integrates leading PLM, MCAD, ECAD, SysML, ERP, Office, Requirements Management and ALM/software tools.

For more information, visit www.xplm.com.

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