



Increased process efficiency thanks to eCAD integration in SAP

Auto supplier Preh makes development processes leaner and boosts process quality.

When you're behind the wheel, you want to have user-friendly controls at your fingertips. Building them that way is the specialty of the auto supplier Preh, a company - founded in 1919 - that has focused on developing and manufacturing driver control systems. Designed as eye-pleasing, high-quality control elements, they contain intelligent electronic components and appropriate software.

► The Requirements

In order to cope with the product range of its steadily growing portfolio, Preh teamed up with consulting and software provider CENIT to introduce the SAP integration of eCAD systems for circuit board development.

"One of our main goals was to eliminate the manual entry of bills of materials in SAP", explains Thomas Nöth of Preh's Division for Change and Transfer Management.

He adds: "Having to manually prepare data before generating a bill of material was very time-consuming. And it was a source of delays and transfer errors

that only became evident later on. With the integration by CENIT, we wanted to make error-free manufacturing bills of materials available to the SAP system as early as possible. Before, we had different people manually managing material and parts lists in different systems.

Our objective was to replace this setup by more efficient and consistent processes." Simultaneously the description of the lightning definitions, which are not handled via the EDA tools, was to be shifted to the same system. And the large-scale project also aimed to enable an automatic synchronization of circuit diagrams and/or component diagrams

► The Project

The first prerequisite of a well-functioning bill of materials management system is having congruent metadata in both IT worlds (CAD ↔ SAP). To achieve this, CENIT's bi-directional SAP interface was installed: An integration solution which ensures automated reconciliation of the eCAD libraries with the centrally administrated SAP material masters. Synchronization is conducted automatically, at night. Where required, however, Preh staff can also trigger the process manually. When information on the PCB construction form is transferred from

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Thomas Nöth
Change and Transfer Management

with the parts lists. The SAP bill of materials acts as the master and basis of all documentation.

the EDA tool to SAP, the ERP system sends short materials texts to the Mentor Graphics Library.

The so-called "BOM Editor", part and parcel of CENIT's eCAD integration, manages all data generated within the EDA tool, as well as lightning definitions

Preh: more efficient and leaner processes

which have to be read into the SAP backbone. These definitions concern adjustments of the LED brightness.

“For us, another important aspect was to be able to also use the BOM Editor to manage components that aren’t explicitly generated in eCAD, like solder or fastening materials”, Thomas Nöth explains. To satisfy this requirement, the CENIT experts customized both systems slightly to permit filing of the relevant additional information.

► The Implementation

Once the transfer is triggered, an automated materials check is conducted in SAP. If this check, which runs in the background, discovers that the bill of materials is not error-free, the transfer will not start: All the more reason to synchronize the libraries regularly.

In order to guarantee the transfer process during the early development phase, the bill of materials of an unfinished design consisting only of a circuit diagram can be transferred as a pure acquisition parts lists without any component information. This ensures early availability of components for the SMD assembly, meaning that all the material planning functions inherent in SAP can be used early on.

Preh Group products come in a wide range of variants. To handle them, variants are generated and managed using the Mentor Variant Manager. The BOM Editor takes all active variants into consideration; for each design variant, it transfers the relevant bills of materials to the SAP system. The CENIT interface automatically recognizes existing variants and provides a window for selecting the maximum bill of material or a variant. Each variant can be directly edited and/or individually

transferred via the BOM Editor.

The frictionless and competent collaboration with CENIT, along with CENIT’s interdisciplinary solution for the eCAD integration, made the project a resounding success: “Thanks to the new solution, our manufacturing division has error-free diagrams and bills of materials available at a much earlier stage”, says Thomas Nöth.

► The Result

Nöth adds: “This SAP interface of CENIT has given us a major time advantage – for purchasing and manufacturing, as well as for the development, because we no longer have to dedicate lots of time to preparing our data for the generation of bills of materials. This is a major benefit.”

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The IT division is likewise satisfied: “This was a smart investment”, says Martin Limpert, Head of IT and Organization. “Together with CENIT, we managed to drastically slim down the processes involved in creating our electronics. And we’ve also seen a major boost in process quality.”

► Preh GmbH

Preh Group, established in 1919, has won many awards for its track record in inventiveness. For example, the company developed “Preh-Funk”, one of the world’s first radio receivers.

Today, Preh concentrates on the automotive sector, supplying control systems for car interiors, sensor systems, electronic control units and assembly equipment. In addition to strong innovative spirit, the enterprise offers high flexibility and speed in developing and manufacturing tailor-made product solutions. Preh’s 2,100 employees are active around the globe, wherever the automotive industry needs their expertise.

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