PROFICIENCY IN PRODUCTION

Süddeutsche Gelenkscheibenfabrik (SGF)

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Wilfried Schneider, CAD Project Manager at SGF

Business Challenges

As a supplier for multiple national and international automobile manufacturers, Süddeutsche Gelenkscheibenfabrik (SGF), headquartered in Waldkraiburg, Germany, is a leading manufacturer for safety and comfort components for the automotive and other industries. SGF had for some time been struggling with poor interoperability of its various high-end CAD systems, a problem costing considerable time and money. However, since deploying the Proficiency CAD interoperability solution, SGF has achieved what many other companies are still striving for: efficient development collaboration – without having to jump through all kinds of technological hoops.

Multi or Single CAD Environment?

With automobile manufacturers increasingly demanding delivery of native design data in their corporate standard format so they can process or rework the data directly, until recently there were basically only two options. Suppliers either ran a multi CAD environment on various CAD systems and then did the design work in the format desired by the particular OEM client. This option did save a significant amount of time because designs could be created directly in the target system of the client without any manual reworking.

The catch, however, was that existing designs could not be reused. Other disadvantages were the high cost for multiple CAD stations, especially if they were not used after the project was completed, not to mention the requirement to establish Best Practices and gain expertise for several formats.

The other option was to set up a single CAD environment and work exclusively with a specific CAD system, establish Best Practices with it, and access existing constructions directly. In this setup, designs could in fact be reused to a great extent. However, in order to deliver designs in the format required by the OEM, suppliers had to remaster the design – a time-consuming and expensive approach. As such, geometrical data had to be converted to the target CAD system using translators such as IGES or STEP. "Design intelligence" – such as features, history, constraints, and metadata – had to be manually designed from scratch. In one case with SGF, a single part had to be exchanged 15 times between the supplier and the manufacturer before it was ready constraints, and metadata – had to be manually designed from scratch. In one case with SGF, a single part had to be exchanged 15 times between the supplier and the manufacturer before it was ready for production. As an indication of the magnitude of this problem, the manual process was carried out not once (from the supplier to the OEM) but almost 30 times!
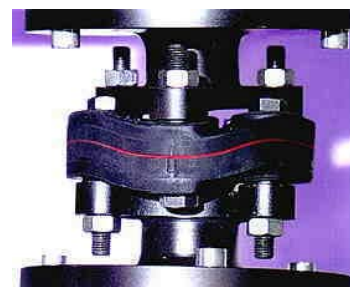
Flexible Driveshaft Coupling Under Angular Loads

Interoperability Costs a Bundle

Weighing the pros and cons of the various alternatives, SGF decided to make a clean break and set up a single CAD environment based on Unigraphics by UGS. However, in order to deliver the required formats (CATIA v4 and CATIA v5 by Dassault Systemes for Daimler-Chrysler and BMW, and Pro/ENGINEERING by PTC for Volkswagen, etc.) each design had to be remastered. "This ran up internal costs of 100,000 euros for a single OEM program and also raked up annual external expenses of approximately 25,000 euros," explained Wilfried Schneider, CAD project manager at SGF, recalling the situation before Proficiency was deployed. "Without a doubt, the only way we can sustain a competitive edge is if we leverage our expertise with state-of-the-art technology. Since we wanted to remain competitive, win new customers and meet the technical demands of providing native data, we started looking around for an appropriate software solution."

Yet another issue that had to be addressed was that proposals often have to be delivered in a previously defined format. Suppliers not able to provide this particular format are often on the wrong foot from the get-go because the time required for re-mastering is not available to ensure top quality of the design.

SGF decided to move forward with Proficiency. The software solution of this company – at that time still quite new in Europe – ensures feature based CAD interoperability. Proficiency's web-based software solution enables the exchange of key information for product design during the entire product lifecycle, including features, history, constraints, assembly structures, measurements, and meta data. "After converting some parts of Unigraphics to the other formats, SGF didn't waste any time choosing Proficiency," Markus Linder, project manager at Proficiency, recalled.

Native CAD A + Proficiency = Native CAD B

In addition to the considerable time and money SGF expected to be saving, another advantage of using Proficiency was that the manufacturers' quality assurance recognizes the designs exchanged by Proficiency as "native". This lets SGF adhere to its single CAD strategy, use Best Practices and also support the reuse of existing designs. "These are major issues if you want to survive in the automotive industry – a highly competitive market," Mr. Schneider pointed out.

It Pays Off

After only one year of using Proficiency, SGF's innovation has paid off. The expectations raised at the beginning of the project have already been met. As Mr. Schneider said, "No longer tied down by format issues, we are now able to turn in proposals in a flash. Proficiency plays a pivotal role in our development environment."

About SGF

Founded in 1946, SGF is headquartered in Waldkraiburg, Germany. As a globally active supplier for the automotive industry, SGF employs a staff of approximately 700 in four locations in Germany and one in Manchester, MI, U.S.A. With more than 50 years of experience in thread and adhesive technology for rubber and silicon processing, SGF is a market leader in the torque transmission industry. SGF's product range comprises elastic, temperature resistant assemblies for torque transmission and vibration absorption, including flexible steering couplings and disks, vibration absorbers and rubber moldings as well as drive shaft, steering, and exhaust systems. All major auto manufacturers, including BMW, DaimlerChrysler, Volkswagen, Audi, Opel, Lamborghini, Rolls Royce, Jaguar, and Ferrari are SGF customers. www.sgf.de

CADinterop

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