SIEMENS

Helena Laboratories

Medical device maker enables CAD data preservation and stable future using Solid Edge with synchronous technology

Industry

Life sciences

Business challenges

Need to redesign popular product but ensure data longevity

Avoid SolidWorks kernel change and major data re-conversion

Leverage 18 years of 3D wireframe data

Simplify process for key veteran designers

Import of purchased parts

Need to reduce very large SolidWorks data files

Need secure data management future

Keys to success

Find a way to protect CAD data's shelf life

Convert SolidWorks data to Solid Edge using synchronous technology

Convert 3D wireframe data to Solid Edge using synchronous technology

Move from complex history-based modeling to synchronous technology

Helena moves to Solid Edge ahead of modeling kernel change of SolidWorks; use of Solid Edge enables 100 percent CAD system to CAD system data conversion

Clinical laboratory instrument and reagent manufacturer

Helena Laboratories is a clinical laboratory instrument manufacturer. Its clients include major medical centers, small hospitals, large reference laboratories and small private doctors' laboratories. With hundreds of laboratory products and more than 40 registered patents, Helena continues to be a market leader in the design and development of new diagnostic tests.

In 2007, Helena switched from an aging 3D wireframe design tool to SolidWorks® software, the popular computer-aided design (CAD) system from Dassault Systèmes Solidworks Corporation. Recently, Helena decided to redesign one of its most popular electrophoresis sample handlers. Handlers are used in applications such as forensics, molecular biology, genetics, microbiology and biochemistry. The issue was that replacement parts for the unit were becoming scarce and Helena needed to redesign it with new components.

Undertaking this and other major design work using SolidWorks seemed logical. But recent press and blog posts from SolidWorks users that Dassault planned to remove the Parasolid® software modeling kernel from its SolidWorks product worried Helena.

Before the redesign projects could begin, Helena needed an answer on the SolidWorks kernel change reports.

Billy Oliver, a longtime SolidWorks user and design engineer at Helena, started reading in 2010 about SolidWorks moving to another modeling kernel. The veteran

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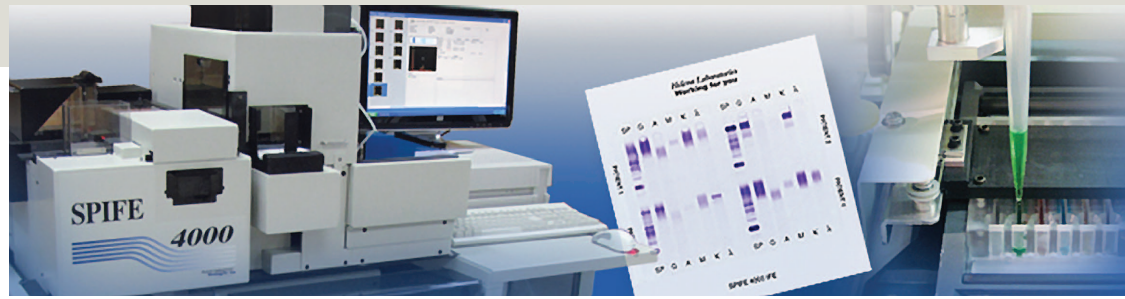
designer says Helena didn't want to redesign its products in SolidWorks if the modeling kernel was changing. To understand the impact, he cites one of the products needing redesign contains about 2,000 unique parts at 12,000 pieces per unit.

"Our SolidWorks channel partner told us we would have to wait for details. The value added reseller (VAR) says SolidWorks had not told them anything, that they knew about as much as I did from the SolidWorks blogs. So I called (SolidWorks); I needed to know. They confirmed the kernel change.

"We don't want to waste valuable resources, time and money to keep implementing changes. It will be years before SolidWorks can convert into the Catia kernel," says Oliver. "I don't want to have to redesign our products twice or stagnate for 10 years."

Once the kernel change was confirmed, Helena switched to Solid Edge® software. Helena now achieves 100 percent conversion of its SolidWorks and CADKEY® software wireframe designs into Solid Edge and preserves its valuable data. There were added business and technical benefits too, such as the ability to upgrade to Teamcenter Express for product data management.

The synchronous technology dividend
Bob Sarrine, a long-time design engineer at the company, said most of Helena's data remains in the old 3D wireframe format. "Redesigning it in SolidWorks was less than smooth," says Sarrine. The issue was the complex process of history-based modeling. He explains, "When we bought

SolidWorks, I thought we shouldn't have to design this way. It's not the way we think. When I picked up Solid Edge and synchronous technology, I got it, fast and easy."

Oliver started working at Helena in 2007, shortly after the company bought licenses for SolidWorks use. "Helena knew they needed to upgrade and they went with the SolidWorks marketing machine," says Oliver. "It's all marketing. The hook was a lot of companies were using it, so it must be the best."

Oliver notes, "Our two main engineers never really liked history-based modeling. It was clumsy for them. They thought it was way too difficult. They get synchronous technology and they're excited about it. Bob (Sarrine) was going through some Solid Edge tutorials one day and was actually giggling. He would get frustrated when using SolidWorks tutorials."

Sarrine says that after he had gone through a few Solid Edge tutorials, he decided to design an airplane structure containing a lot complex curves. "I just push a button and boom, it's there. I don't see how this Solid Edge implementation can possibly fail," he says.

Helena has 18 years worth of 3D wireframe design data that represents about 10 major products still in the market. Moving that data to a new CAD system is very important to Helena. "Synchronous technology blew me away, especially the ease of importing CAD data like our 3D wireframe data," says Oliver.

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Design Engineer
Helena

CAD technology leadership

In a recent post on the Dezignstuff blog, Oliver suggests that SolidWorks users should "run not walk" away from their software. He cites several observations from his research that ultimately led to the Solid Edge license purchase: "Solid Edge in the last three to four years has been working on a technological evolution while SolidWorks has been working on menu bar icons, shading and colors. Everyone on this blog has been complaining over the last few years about SolidWorks development, direction and why they are not fixing bugs, just interface stuff, etc. The kernel change is going to be long and painful."

Oliver notes several other comparisons that led to Helena's switch: "There's more sophistication in Solid Edge than

SolidWorks, sheet metal design for example. You can tell Solid Edge is the original and SolidWorks is the clone, using Siemens PLM Software's Parasolid technology that was not invented by SolidWorks. It (SolidWorks) has run into a dead end because they can't use Siemens PLM Software's synchronous technology. Solid Edge is leading the field in direct modeling with synchronous technology."

Product data management leadership

Helena also had concerns about its CAD data management in the future with SolidWorks. "We need a stable path for the next 5 to 10 years," says Oliver. "We found that stability with Teamcenter Express and it's expandability to full-blown Teamcenter from Siemens PLM Software. The SolidWorks path seemed uncertain to us."