

Changing systems without disruption

Seats Inc.'s move to 3D jumps design productivity, slashes prototyping time and sets the stage for advanced manufacturing

Siemens PLM Software

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► Issues:

Decrease design time for complex seat assemblies

Reduce chance of error in design data sent to customers and sister company

Reduce manufacturing costs by adopting advanced, CAM-based production techniques

► Approach:

Upgrade from 2D CAD to solid modeling

Build and de-bug seats as solid assemblies on-screen; use solid models as virtual prototypes

Send solid geometry to customers and sister company instead of drawings

Use 3D data to drive manufacturing machines

► Results:

Design productivity is much higher; time to create complex assemblies cut by 30 percent

Prototyping time slashed 70 percent, costs lower too

Data for customers and sister company is now error-free

Advanced sheet metal, foam molding, routing installed in house for lower production time and costs

SEATS INC.

- Vehicle seat maker, Seats Inc., needed the benefits of solid modeling – accurate communication with customers, geometric data to drive manufacturing equipment – without sacrificing engineering productivity.

To 3D or not to 3D

Seats Inc. faced what has become a common dilemma for mid-size manufacturing companies: to upgrade to solid modeling or stick with a familiar 2D design system. Solid modeling's advantages over drawings are proven: a more accurate part definition; the ability to assemble parts on-screen and detect errors; many more downstream uses for design data, such as images for marketing, exploded views for documentation and 3D geometry to drive computerized manufacturing equipment. Seats Inc. needed these capabilities, but didn't want designers' productivity to decline due to a new modeling approach.

An intuitive solution

After evaluating a number of solid modelers, Seats Inc. saw a clear difference between Solid Edge® software and other systems. Solid Edge's unique user interface makes it easy to learn and intuitive to use. Another feature Seats Inc. likes is the ability to import customers' Pro/E and Catia files. The company purchased Solid Edge licenses for nine designers and adopted a new design process in which seat parts are modeled as solids, then assembled



Solutions/Services

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Client's primary business

Seats Inc. designs and manufactures seating and related products for heavy-duty trucks, emergency vehicles, delivery vans, locomotives, construction equipment and other highway and off-highway equipment.

Client location

Baraboo, Wisconsin
 United States

"We wanted the benefits of solid modeling but couldn't risk losing productivity on a system that people couldn't or didn't want to use.

Learning Solid Edge came naturally to our engineers and their productivity jumped after only months."

"We're very excited about the advances we're making in manufacturing thanks to Solid Edge."

*Mike Saari
 Project Engineer/CAD Administrator
 Seats Inc.*

on-screen to create a virtual representation of the entire product. Solid geometry has replaced drawings as the preferred form of communication with customers. And the availability of 3D part representations has paved the way for big changes on the manufacturing side of the house.

Benefits in multiple areas

Fears of a productivity drop quickly evaporated. Thanks to Solid Edge's assembly modeling capability and the ability to view complex seat assemblies (up to 200 parts) from multiple angles, Seats Inc. has achieved a 30 percent savings in design time, compared to working with drawings. Additional time savings come during the creation of prototypes, which are now made directly from 3D models. Some prototypes take 70 percent less time to make than they did in the past. Since assemblies are thoroughly debugged in Solid Edge, data sent to customers and ParCar Corp., Seats Inc.'s sister company, is error-free. On the manufacturing side, the availability of 3D geometry has opened the door to a number of advanced processes. Seats Inc. recently completed a 64,000-square-foot addition to an existing plant and equipped it with state-of-the-art computerized manufacturing equipment. Solid Edge geometry is now being used to drive the most advanced punch plasma, thermoforming and routing machines.

Up to speed in no time

As a testament to how quickly designers became proficient in Solid Edge, in the second month with the new software, nine engineers created 265 solid models (conversions of existing 2D part drawings). A few months later they were up to 800 conversions/month.

► For more information, contact your local Solid Edge representative:

► **Contact**

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