

Solid Edge

Kimball International

Use of Solid Edge with synchronous technology delivers higher design productivity and more fun

Industry

Consumer products

Business challenges

Changing customer demand

Manufacturing costs

Overseas competition

Finite engineering resources

Keys to success

Move from history-based design to synchronous technology

Leverage decades of valuable legacy designs

Make design team more productive

Make product engineering more fun

Results

Expect 3X faster assembly editing

Design changes in minutes vs. hours

Correcting bad features in minutes vs. days

Easy, fast import of massive amount of I-deas CAD data

CAD now more user-friendly

Faster new design, edits and import of legacy CAD data

Design breakthrough

Kimball International, Inc. (Kimball) provides a variety of products from two business segments: the Electronic Manufacturing Services segment and the Furniture segment. The Kimball Electronics Group provides engineering and manufacturing services, which utilize common production and support capabilities globally, to automotive, industrial, medical and public safety markets. The Furniture segment provides furniture for the office and hospitality markets sold under the family of brand names Kimball Office, National Office Furniture, and Kimball Hospitality. As with any company that adapts well to change, Kimball's flexibility and versatility allow it to stay in front of business challenges, including the ever-changing office environment along with the escalating indirect and direct costs of running a responsible, global company.

"Office furniture has changed significantly in the last few years," says Ricardo Espinosa, R&D Engineering Services manager at Kimball.

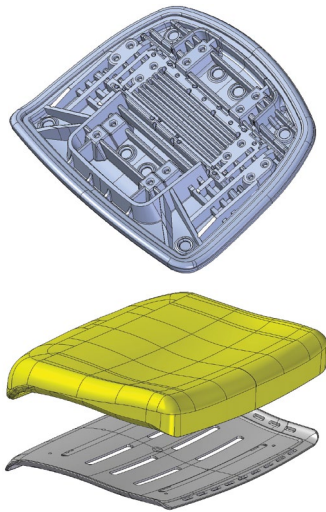
"The traditional office space continues to evolve," Espinosa notes. "A considerable number of office environments have migrated to an open plan concept for better interaction, collaboration, and networking. New communication technology



This Kimball hotel credenza was designed and rendered using Solid Edge.

translates into people using office space in different ways. We're designing furniture to accommodate technology that has increased the integration of power and communications, which places new demands on engineering."

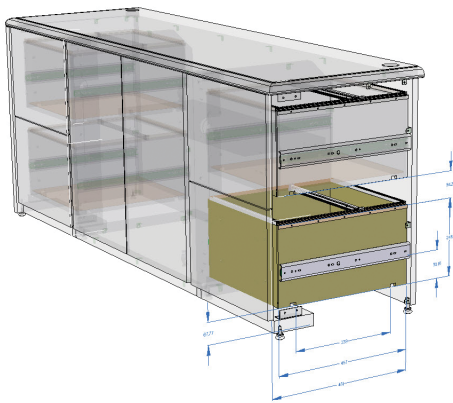
These business drivers impact more than 50 product designers at Kimball. The company develops several new product lines each year with hundreds of configurations each. "Resources must be managed carefully, and we have to be very efficient to hit our targets and produce the high-quality products Kimball is known for," says Espinosa.



Complex curved surfaces and complex plastic cast parts designed by Kimball using Solid Edge.



This Kimball WaveWorks Workstation with Timberlane chairs was designed and rendered with Solid Edge.



A credenza assembly designed using Solid Edge. With synchronous technology, Kimball is able easily import its legacy I-deas CAD data and make changes in minutes compared to hours in a history-based CAD system.

New demands placed on engineering also increase the need to better leverage decades of design work. Lots of the computer-aided design (CAD) data was created using I-deas™ software, with a knowledge base dating back to the 1980s and 90s. The legacy design data is extremely valuable to Kimball.

In 2004, Kimball moved its designers to Siemens PLM Software's Solid Edge® software. At the time, Solid Edge was a history-based CAD system only. While the move updated Kimball to a new, modern CAD system, leveraging the older data created using I-deas remained difficult, but still important.

Even though Kimball products are unique, they share similar components. "We use these as a base for the final product, which is ultimately being defined by the innovation features and functionality added to it," says Espinosa. "The final result is completely different."

Enter synchronous technology

Kimball used traditional, history-tree based Solid Edge for years. In 2008, Siemens PLM Software launched Solid Edge with synchronous technology to enable users to

accelerate new design processes, make faster changes to existing designs and improve the re-use of imported data. Kimball moved to Solid Edge with synchronous technology to address its business and engineering challenges.

Kimball started the change to synchronous technology with a small group of super-users, in early summer. With the knowledge from this experience, Kimball is now in the process of moving all 50+ product engineers to synchronous technology, with an expected completion in early fall.

"When you work with a traditional CAD system, it's very slow to create all these little modifications; basically, you have to do the same thing over and over," says Espinosa. With synchronous technology, Kimball can create models without doing additional calculations. "Without even knowing the dimensions of the final components, we can just edit the existing part and create something new. We are learning how to adapt our products much faster."

"Even small changes may take hours, if you have to open and edit individual parts in a traditional CAD model," says Espinosa.

Solutions/Services

Solid Edge
www.siemens.com/solidedge

Customer's primary business

Kimball International, Inc.
designs and manufactures
furniture for the office and
hospitality markets.
www.kimball.com

Customer location

Jasper, Indiana
United States

"With synchronous technology, we anticipate significant time savings over history-based modeling. It's a much needed productivity gain that we can't wait to realize as we continue to roll out the new tool.

Ricardo Espinosa
R&D Engineering Services
Manager
Kimball Furniture Group

"With synchronous technology, we anticipate significant time savings in producing documentation and drawings for products with hundreds of different configurations. We anticipate going from days to hours.

"Before synchronous technology, we had to start from scratch. Now with synchronous technology, we can re-use the legacy data that came in during the '90s and '80s. It's really easy to use the existing information and create new components."

According to the veteran designer, the game-changing speed of synchronous technology applies to both new and edited design work.

Espinosa explains, "We bring assemblies created using I-deas into synchronous technology, and then we use it to work on individual components. We don't modify everything; sometimes we make small changes like adding holes or slots. We change dimensions and that's all we do. Sometimes we use one of these existing components and create a brand-new product based on the geometry we already have."

Kimball now imports legacy data created with I-deas into Solid Edge quickly, as opposed to what used to be a lengthy history-based CAD process. "We import parts and have them ready for use in a much more timely fashion with synchronous technology," says Espinosa.

Prior to synchronous technology, Kimball stopped re-using some of the important data it had created using I-deas. "In history-based CAD, if you aren't the original designer, there's no way to figure out how it was designed," says Espinosa. "We had to redesign most components from

scratch. The data we could retrieve took days to import, but using synchronous technology it now takes minutes."

More user-friendly, more enjoyable process for product development

Kimball estimates that most of the time savings will come from simply importing and editing its legacy CAD designs. With the challenge of not increasing staff, synchronous technology's potential to be a time-saver provides the opportunity for improved productivity," says Espinosa.

"There's a nice return on investment when adopting synchronous technology, but our main reason for implementing the tool is to be more productive, design better products, get to market faster and create an easier process to leverage legacy data," says Espinosa.

Espinosa notes synchronous technology took some adjustment, but proved itself quickly: "I had to erase in my mind 20 years of history-tree design technology. Within a couple of weeks, I started liking it and so did the rest of the people in my company."

"You can become more productive; you can enjoy more of what you're doing," says Espinosa. "When you work with traditional CAD, product engineering work becomes very repetitive. With synchronous technology, you can participate more in the design process, the fun side of developing products."

Siemens PLM Software

Americas +1 314 264 8287
Europe +44 (0) 1276 413200
Asia-Pacific +852 2230 3308

www.siemens.com/plm

© 2013 Siemens Product Lifecycle Management Software Inc. Siemens and the Siemens logo are registered trademarks of Siemens AG. D-Cubed, Femap, Geolus, GO PLM, I-deas, Insight, JT, NX, Parasolid, Solid Edge, Teamcenter, Tecnomatix and Velocity Series are trademarks or registered trademarks of Siemens Product Lifecycle Management Software Inc. or its subsidiaries in the United States and in other countries. All other logos, trademarks, registered trademarks or service marks used herein are the property of their respective holders.

Z9 31192 4/13 B