

Solid Edge: Design without Boundaries

CIMdata Commentary

Key takeaways:

- *Solid Edge users are increasingly employing Synchronous technology in their model creation and editing—they report 61% are more satisfied using this approach than purely history-based modeling techniques*
- *Solid Edge, Siemens PLM Software's mainstream CAD solution, celebrated its twentieth birthday*

Mr. John Miller, Senior Vice President and General Manager, Mainstream Engineering, at Siemens PLM Software opened Solid Edge University 2015, the annual Solid Edge user conference, on October 27, 2015, under the banner “Design without Boundaries.” Speaking from the stage at the Duke Energy Convention Center in Cincinnati, Ohio, Mr. Miller addressed an audience of Solid Edge users, value-added resellers, third-party solution providers, media, and industry analysts. He noted that Solid Edge was celebrating its twentieth birthday and proudly displayed the product’s first shipping box signed by all the original Solid Edge developers and staff. CIMdata was pleased to see the continued growth in attendance and interest in the conference from Solid Edge users.

The Design without Boundaries theme originates from the CAD modeling flexibility afforded Solid Edge users from Siemens PLM Software’s Synchronous technology embedded in the solution. “Synchronous technology examines a product model’s current geometric conditions in real-time and combines them with parametric and geometric constraints added by the designer to evaluate and perform new geometry construction and edit of the model without the need for full history replay.”¹ Mr. Miller highlighted a recent Solid Edge survey that reported 61 percent of users were happier with their adoption of synchronous technology over purely history-based modeling approaches.

Mr. Miller encouraged the attendees to actively participate in the over 75 conference sessions led by Solid Edge staff and third-party presenters, including hands-on sessions with the latest Solid Edge ST8 software release. Later in the opening session, Mr. Ken Hosch, Director, Innovation, Research & Strategy in Product Engineering at Siemens PLM Software introduced Catchbook software to the audience. Catchbook is Siemens’ application for drawing, sketching, and tracing while producing accurate results. The solution, first shown to CIMdata in September at the Siemens PLM Software 2015 Analyst Conference, is designed specifically for tablets and smartphones.² Catchbook uses the D-Cubed geometric constraint engine to interpret a user’s intent and turn roughly sketched geometry into accurate shapes. Following the Analyst event CIMdata reported that such tools enable more people to capture their design ideas and they “will increase innovation and collaboration across a broader scope of the of the extended enterprise.” See www.catchbook.com for more information on the new solution.

Before dispersing into numerous breakout sessions, Mr. Dan Staples, Vice President, Solid Edge Development highlighted a number of the new enhancements in Solid Edge ST8, released in June 2015. Leading his list was the powerful “Like Me” pattern recognition capability that allows a user to identify any number of model faces and automatically find and

¹ White paper: Synchronous Technology, CPDA (now part of CIMdata). April 2008.

² CIMdata Commentary: Siemens PLM Software Analyst Conference 2015. CIMdata. September 23, 2015.

highlight other exact copies of these in the model. CIMdata recently has seen this geometric modeling advance in other solutions and notes that it is extremely useful when working with imported models. Another enhancement that CIMdata believes users will find valuable is the Pattern by Table capability where the placement pattern of an object can be controlled by a spreadsheet defining each object's center location. The enhancement should prove to be a powerful tool to allow users to define irregular patterns.

Mr. Staples then led a succession of third-party solution providers to the stage by first describing a design problem and then having them respond: "There's an app for that." Included in the presentation were QuadriSpace (www.quadrispace.com) for technical publishing, Design Simulation Technologies (www.design-simulation.com) for CAD-embedded design validation, and Zuken (www.zuken.com) for ECAD/MCAD integration.

One breakout session that CIMdata found interesting was titled Animating Assemblies hosted by Mr. Art Patrick, Product Manager Assemblies at Siemens PLM. Mr. Patrick demonstrated how to define a "motor" that drives motion by incremental changes to any variable in the model, and then to reverse the motion. He showed an intriguing series of animation results when he adjusted how much of the assembly was recomputed at each incremental step of the controlling motor's variable. The associated model updates can be restricted to the object relationship level, the active part level, or the full assembly. Obviously the wider the scope, the more time is needed to perform any history replay and synchronous technology re-compute on the model. CIMdata observed that the variation allows users to be more productive by being able to quickly validate their specified motion by first observing it at the relationship or part level, before investing in the time to re-compute at the assembly level.

Over the two days of Solid Edge University 2015, the Siemens PLM Software staff together with their third-party sponsors and partners showcased education about and new capabilities for Solid Edge users. CIMdata believes it provided an important learning and networking experience for users who invested their valuable time by attending. The Solid Edge team and their product, Solid Edge ST8, offer the marketplace a professional, competent solution to product design creation.

About CIMdata

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