

SolidWorks World 2013

CIMdata Commentary

Key takeaways:

- *SolidWorks introduces My.SolidWorks, a free service that allows users to aggregate information drawn from the Internet.*
- *SolidWorks offers more information on a new product, SolidWorks Mechanical Conceptual, scheduled for release in September/October 2013.*

SolidWorks Corporation held their fifteenth annual user conference, SolidWorks World 2013, over four days, January 20-23, 2013 at the Florida Disney World Swan and Dolphin Resort. Forty-five hundred attendees, including end users, resellers, third-party application vendors and SolidWorks employees, were welcomed by Bertrand Sicot, SolidWorks CEO. He emphasized the conference's theme "Design Without Limits" by reminding the audience that the current shipping version, SolidWorks 2013, supports backward compatibility. SolidWorks 2013 parts can be activated in SolidWorks 2012. Mr. Sicot also proudly noted that in December 2012 the company sold their two millionth copy of the software through their sales channel that now numbers 407 resellers worldwide.

Bernard Charles, CEO and President of parent company Dassault Systèmes, also welcomed attendees and emphasized the Dassault Systèmes' vision of the future based on their currently evolving 3DEXperience platform that "provides business and people with virtual universes to imagine sustainable innovations." They announced a new free service called My.SolidWorks.com that allows users to "aggregates company and community knowledge. My.SolidWorks pulls relevant information (forum discussions, blog posts, YouTube, Twitter, help files and more) into a single view" and can be customized so that a user will only see the information most relevant to them. The service is currently in public beta.

Fielder Hiss, Vice President Product Management, took the stage to introduce SolidWorks Mechanical Conceptual, a new conceptual modeling product targeted for release in the September/October 2013 timeframe. While providing only a limited description of the new product, Mr. Hiss did highlight the new application by showing an example of a mechanical structure of linkages and motion analysis. SolidWorks Mechanical Conceptual is being built atop Dassault Systèmes' 3DEXperience platform and is the latest in a two year journey for the company that started in 2011 with the initial possibility that the flagship SolidWorks product would change its geometric kernel from Parasolid to the CATIA V5 Modeler, now called the CGM Modeler. SolidWorks moved away from that direction last year but would only say there would be a complementary additional product for doing conceptual design. Today the message is that "motion" will be core to the new product. Expect, however, some level of a cloud implementation. The company did announce that the real customer beta would begin in May likely to work out any issues that arise, especially in transferring data from Mechanical Conceptual to SolidWorks.

After the first day's plenary session, the SolidWorks team embarked on an impressive offering of over 150 technical sessions for their users, spread out over three days. In addition the event included a third-party vendor showcase, Partner Pavilion, with over 100 diverse hardware and software tools being demonstrated for the attendees.

True to past user conferences, SolidWorks once again dazzled the audience on the second day with addresses from two keynote speakers. First, Professor Vijay Kumar from the School

of Engineering and Applied Sciences of Pennsylvania University presented his team's work on swarming robots. At the General Robotics, Automation, Sensing and Perception (GRASP) Lab they build flying quadrotors, small, agile robots that swarm, sense each other, and form ad hoc teams for construction, surveying disasters and more. (see <https://www.youtube.com/watch?v=K1HhK5yFuRo>). Then in what seemed an impossible task to top Professor Kumar's presentation, Elias Knubben, Head of Corporate Bionic Project at Festo in Germany took the stage. Festo (www.festo.com) is a family owned supplier of pneumatic and electrical automation technologies. Mr. Knubben ended up bringing the audience to their feet with a demonstration of the SmartBird robot his team designed and built. As the mechanical bird gracefully flew over the huge conference audience, he spoke of their strategy to find in nature examples of solutions to complex engineering problems. (see <https://www.youtube.com/watch?v=nnR8fDW3llo>).

In the Partner Pavilion, a wide range of third-party vendors tempted attendees with their technology. CIMdata participated in interesting discussions with NVIDIA (www.nvidia.com), the graphics processor company who was showcasing their Maximus technology. Maximus merges the visualization and interactive design capability of NVIDIA Quadro® GPUs and the computing power of NVIDIA Tesla GPUs in a single workstation. In Maximus the Tesla GPU companion processor performs the heavy lifting of photorealistic rendering or engineering simulation computation. Their General Manager of Manufacturing industries spoke of the company's recent technical breakthrough of being able to now capture the bit stream data at the lowest level in the architecture in order to transfer it out over the net even before the data reaches the local display screen. Such a breakthrough will surely kick start a new round of collaboration technology improvements in performance as well as potentially new capabilities.

In a blend of both software and hardware, Mcor Technologies (www.mcor technologies.com), an Irish 3D printing company, presented their Mcor Iris 3D printing product. Mcor Iris is a unique solution in a sea of other 3D printing solutions in that it handles color (1 million+ colors and 5760 x 1440 x 508dpi) and takes as its input media common copier paper to produce 3D prints at an office friendly low noise level and produces no toxic waste.

On the software side, Anark Corporation (www.anark.com) demonstrated their MBEWorks software. MBEWorks represents a model-based enterprise (also called a model-based definition implementation) solution for the communication of 3D CAD data. By taking a Part Manufacturing Information (PMI) annotated 3D solid and outputting it in a neutral 3D PDF document, users can collaborate on the complete model description without the need for 2D drawings. The approach first fostered in the aerospace and defense segment is seeing increased attention across many other industry verticals today.

Also ExactFlat (www.exactflat.com) introduced their ExactFlat Design Studio solution that allows users to design fabric and solid components in a single application. With important uses in automotive seat design and related applications, the software delivers a design environment through 3D CAD design, flattening, nesting, and cutting. The company has tackled one aspect of the sophisticated materials environment that the average 3D solids modeling products have yet to address. If we are ever to fully generate a true virtual product world, malleable materials such as cloth and rubber must be simulated.

SolidWorks does an impressive job of staging their annual user conference each year. The event offers a rich environment for SolidWorks users to learn about current capabilities and the future directions of the product. San Diego, California has been selected for SolidWorks World 2014.

About CIMdata

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