

Excel Foundry Forges Ahead

Expanding revenues and markets by combining scan-to-CAD software from ReverseEngineering.com with a portable Romer arm.

by Christiann Moore



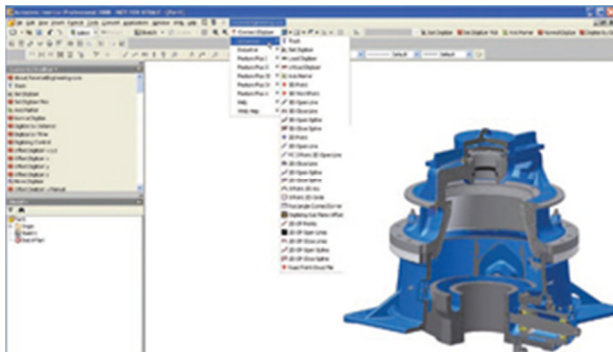
Excel Foundry and Machine expanded its market by combining a Romer Cimcore 3000i portable measurement machine with scan-to-CAD software from ReverseEngineering.com.

Facing fierce competition, Illinois-based Excel Foundry & Machine — a manufacturer of replacement parts for mining and rock-crushing equipment — decided to expand rather than stay in place. Discarding its manual processes, Excel deployed CAD-integrated 3D software from **ReverseEngineering.com** (formerly HighRES) to operate more efficiently and develop new lines of business. The result: More revenue, more customers, and a brighter future.

For more than 75 years, Excel has operated under high standards of quality, precision, professionalism, and integrity, manufacturing some of the biggest and most demanding parts for the mining industry and other heavy industries, including crusher parts, mining equipment parts, and original equipment for manufacturers. The parts Excel manufactures go into cone crushers, hydraulic shovels, electric shovels, rope shovels, excavators, mining drills, and drag lines.

The Decision to Move Forward

A little more than three years ago, Excel Foundry & Machine faced a dilemma. It could continue with its proven but manual processes — measuring replacement parts in the field, for example, with calipers and other manual instruments — or it could modernize by purchasing a portable coordinate measuring machine (PCMM).



Excel's new solution takes the digitized point cloud and converts it into an Inventor solid model.

Trouble was, the engineers knew the PCMM alone would not give the company the competitive advantage it needed. It was clear that the PCMM hardware needed software that would enable it to deliver its measurement data into the company's CAD system easily, quickly, and accurately. That's when it found the La Jolla, CA-based company called HighRES, now known as ReverseEngineering.com.

"We needed to venture off into more complex parts and systems and in doing so it's rather difficult to get all the dimensions you need with the old hand tools," explained Chris DeWitt, senior design engineer for Excel Foundry & Machine.

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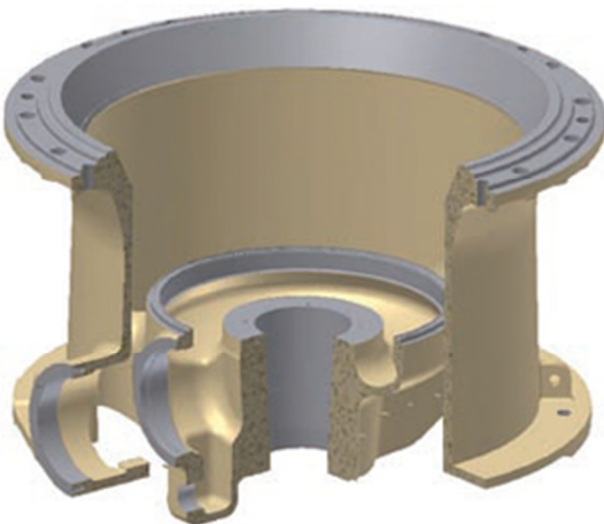
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Integration, Accuracy ... Profits

After looking at the PCMM-to-CAD software available on the market, Excel settled on a solution provided by ReverseEngineering.com. “We looked at a couple other companies but none of the competition’s software was nearly as robust as ReverseEngineering.com’s — not nearly as integrated into our CAD package,” said Dewitt.



Because the new system translated directly to Inventor files, engineers were able to work in a familiar modeling environment.

When it deployed the ReverseEngineering.com solution with its new Romer Cimcore PCMM, Excel had a fully native software bridging solution that drove data directly into its CAD system as modifiable parametric sketches. It was fully plug-and-play, absolutely integrated, operable under harsh field conditions, and easily learned and operated.

“Once we started looking at using a PCMM the clear choice for software was ReverseEngineering.com,” said Dewitt. “It was the only software we saw that could be 100 percent integrated into our modeling system.”

The Results: A True Competitive Advantage

Thanks to the direct-to-CAD qualities of the ReverseEngineering.com software, Excel Foundry has opened up new lines of business that have delivered new revenues to the company. The combination of the software with the PCMM enabled Excel to create parts faster, which in turn meant it was more likely to take on large, complex jobs.

The company has also enjoyed unprecedented flexibility, integration, accuracy, and dependability from its PCMM and software. Being able to work directly inside of its current 3D modeling application was extremely important because it allowed the company to use software its engineers were already familiar with. Any of the other programs the company investigated would have meant a significant learning curve on a new software platform and then would have required translation software to import data into its 3D modeling application before even being able to create a model.

The ReverseEngineering.com system enabled a “model as you measure” method, ensuring nothing was missing since a completed 3D model results as soon as the measurements are taken.

Plus, Excel has been able to make more parts for more machines. “Between the PCMM and HighRES it opened things up for larger, more complex parts that we can supply to the aftermarket,” says Dewitt. “Basically now anything goes. It opened up another world of opportunities. When somebody from sales comes to us asking if we can handle a large complex project the first thing we’ll say is, ‘Let’s get someone on a plane and measure it up.’ Without the PCMM and HighRES, it wasn’t possible to move so quickly.”

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Last, the company enjoyed customer service Dewitt characterizes as “great.” In fact, Dewitt is hard-pressed to offer suggestions for improvement of the ReverseEngineering software. “If you can do it in your CAD package, you can do it with HighRES. HighRES allows you to do everything inside the CAD,” he says.



An added benefit of the ReverseEngineering.com solution is that the company has been able to take on more complex jobs.

The Future: More Revenues, More Business

Dewitt and Excel also appreciate the flexibility of ReverseEngineering.com software. Though it recently switched to a different CAD system, the company was able to stay with the robust ReverseEngineering.com software it has come to depend on — a relief to Dewitt.

In fact, it’s difficult for Dewitt to imagine work without ReverseEngineering.com. “It would probably take four times longer to do the same stuff we do now. We would have had to input everything manually, and the amount of time to do that would have been astronomical. If ReverseEngineering.com didn’t exist, we probably wouldn’t have purchased the PCMM. It does everything we need it to do — plus a lot more. There are features and functions we haven’t even touched and we use it a lot.”

Excel recently bought a second arm, and second ReverseEngineering.com seat. There was just too much business to handle, thanks in large part to ReverseEngineering’s direct-to-CAD capabilities.

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