

Building The Building Before It's Even Built

K-zoo Contractor Is First To Use New 3-D Modeling

By David Czurak

KALAMAZOO — Aerospace has it. As does the auto industry.

So why isn't a similar three-dimensional modeling program available for the construction trade? After all, all three are builders.

Well, most might not know this, but one is available. And it is being used today.

"It's so exciting, what is happening. It's hard to sleep," said James Dally, president of Maverick Construction Co. of Kalamazoo.

Maverick, winner of three Associated Builders & Contractors Awards of Excellence last fall, has joined forces with N.L. Barnes Construction of San Francisco to create a brand new 3-D modeling program for builders, which looks like a first for the industry.

"What we are doing is bringing to the construction industry three-dimensional modeling. Not as the construction and architectural industry knows it, but bringing it as the manufacturing and aerospace industry implements it," said Dally.

Dally remarked that aerospace engineers won't even consider building an aircraft until they know that every part will fit properly, and they use 3-D modeling to do that. But in construction, builders build from parametric prints and then iron out the kinks as a structure is going up. Using that method, Dally said, makes assembly the most tedious part of the building process.

So Maverick and Barnes put their heads together and modeled a 3-D program after the kind being used in aerospace and automotive manufacturing.

"What we've done is (to bring) this to the construction industry and the success is huge," said Dally. "This is something that no one else has, no one else has done this. This is a first for the construction industry."

Maverick and Barnes are
See 3-D, page 11

3-D

Continued from page 1

using the program on a Sutter Health facility improvement plan in California valued at \$3.5 billion. The firms are analyzing whether any conflicts exist in the construction plans on the project's first building, a \$100 million structure. In just the first three weeks of modeling, Dally said they found 52 conflicts.

So far, the analysis has cost Sutter \$75,000, or about \$1,400 for each conflict. Although Dally said he hasn't determined how much it would have cost the non-profit health system to make those corrections during the building process, he does know it would have been a lot more than \$75,000.

So in effect, Maverick and Barnes are building the building before it is actually built.

"We can actually 3-D model this building, a solid model and not just a visual program off the shelf. For example, AutoCAD might be about 200 megabytes; our computers run off about 4,600," said Dally.

Using the modeling program eliminates costly delays in the construction process.

"And who pays for that? The owner does," said Dally.

Maverick and Barnes are shopping their

program around. Dally told the Business Journal that they haven't applied for a patent on the program yet, but felt it was patentable.

"We've been developing this for four years and we've invested over \$1 million each year into what we call our cyber warehouse of construction components. Sure, someone could try to copy what we've done, and they can have at it. That would be great for our industry," said Dally.

"We're not concerned about somebody taking what we've done and duplicating it because it's going to take them a while to even begin to catch up," he added.

Maverick is in its sixth year of business, specializing in the design-and-build aspect of the industry. The firm, located at 9110 Portage Road, has 13 employees. Barnes has been in business since 1926.

The West Michigan ABC Chapter honored Maverick in October with two Awards of Excellence for building the Oneway Products/TTS Classic Car Co. structure in Kalamazoo. The trade association also gave Maverick a similar award for its construction of the Parker Hannifin Corp. Pneumatic Division North American headquarters in Richland. **BJ**