

ShastaCAD

Drawing in the Digital Age

By Reid Creager

Ten years ago, the people at Shasta Pools & Spas had a growing problem: Business was so good, there almost wasn't enough time to get it done.

This seemingly pleasant quandary had unpleasant consequences — it was getting harder to get jobs processed to construction on time and employees suffered increasingly from growing workloads. So necessity became the mother of invention. And now, after years of analyzing, experimenting and planning, ShastaCAD may be on its way to becoming the father of pool-specific computer-aided design programs.

Many pool builders have turned to CAD programs as a faster, more cost-effective means of design. With pool specs and dimensions digitally created, the finished product and landscape can be rendered before construction to give customers a very accurate idea of how their pool will look. Calculations are more precise, reducing revisions and saving time and money; changes are made with a few clicks.

A CHOICE AND A CHALLENGE

Jim Just, internal new pools operations manager at the Phoenix-based company, recalls the situation in 1994. "The first month that we went over 400 in monthly pool sales, we came to the conclusion that we had to streamline our drafting to make it more efficient and

effective," he says. "We looked at different software in the market, and after analyzing, we felt our best choice was AutoCAD" — which is made by Autodesk, a leader in digital design and content.



The result of Jim Just's hard work (and that of his team) is less work for designers.

The AutoCAD platform is known for its power and Autodesk is known for its support and continual research and development. But AutoCAD is quite complex. "We needed to make it simple to learn and easy to use," Just says. "It had to be a value-added tool for our sales designers and drafting department, as well as being a 'wow' for our customers."

It was time for some internal dia-

logue. So in 1995, Shasta developed a CAD-user group and had meetings with the sales, design and drafting departments. "We wanted to customize the AutoCAD software to make it more user-friendly," Just says. "The problem

was, there was no standardization for the pool and spa industry to make it simple for our people to use in the field."

As he notes, AutoCAD — which is the dominant program among architects and designers in the country — can be intimidating software because it does so much and isn't pool-specific. "You can build anything with it — rocket ships, you name it. Our challenge was to harness the power we needed to design pools and backyard environments in a simple-to-learn-and-use program."

So in '96, Shasta hired a consultant who customized the software specifically for the pool industry. He wrote code that could be run over AutoCAD so the program wouldn't be so complicated to use. "Today," Just says, "we have Ben Hill on staff, and he not only trains but also

updates and modifies our code for the always-changing industry options and the specific requests of our end users, the pool design professionals."

A big key to the design was standardizing the layering process. Layers are groupings of data that can be viewed individually or in combination with other layers. Think "transparent overlays."

"For example," Just says of the standards that were adopted from the

American Institute of Architects, “the residence is drawn on the building layer or transparency. The fence is drawn on another layer. The pool, deck equipment and landscape all reside on their individual layers as well.”

When the process was first completed, it had about 60 layers, and now with the additions of new features and symbols, ShastaCAD has more than 120 layers. “When an item is inserted into ShastaCAD, the layer is automatically set,” Just says. “If you insert a pool skimmer, it’s placed on the equipment layer. If you drop in a tree, it’s placed on a landscape layer.

“You shouldn’t have to create any of your own layers, because most standard layers are already created for you. However, ShastaCAD fully supports the addition of more layers by the end user.”

When the code was customized, Shasta bought the full version of AutoCAD and loaded its own new software on top of that. The first ShastaCAD sales designer training began in the fall of 1997 — and any fears

about learning difficulty soon eased.

“It’s the same routine in a different language,” Just says. “You know how in Microsoft Word, at the top of the file there are pull-down boxes that say File, Edit, View, etc.? We simply changed them and customized those pull-down boxes, and added shortcut icons, using applications specific for the pool industry.

“We’ve been able to take the complicated software and shorten the learning curve. We have sales designers who were computer illiterate who learned the process in a 40-hour training period. In a day and a half you can draw the residence, pool water, features, raised areas, landscape and pool. Since repetition is the greatest aid to learning, we currently encourage all of our trainees to commit to a week’s worth of training to ensure it sinks in.”

Shasta copyrighted its software in 2000 and had it trademarked in 2003. Meanwhile, the Master Pools Guild, of which Shasta is a member, was looking for software and some of its members

invested in the new program. The new concept was catching on.

STREAMLINED STATE-OF-THE-ART
But one glitch remained: To use ShastaCAD, you’d have to buy AutoCAD and then install the Shasta program on top of that. Some builders would find that to be an obstacle. So last year, Shasta became an original equipment manufacturing partner with Autodesk, finalizing the deal in January. Now Shasta purchases from Autodesk the tools needed to make ShastaCAD run. It’s all combined in one program under one license, with no need to purchase both programs anymore.

Just says potential concerns about competition with Autodesk were quickly put to rest. “That’s really not an issue because Autodesk’s total programs are so wide in scope,” he says. “Autodesk feels we’ll be reaching a market they may never have reached. Their out-of-the-box software was not



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written specifically for the swimming pool industry.”

The benefits of ShastaCAD are immediate and plentiful. There’s reduced overhead, with fewer draftsmen needed because of the efficiency involved. The company has gone from six draftsmen to three.

The program also provides an advantage in terms of faster and more satisfying customer service, not to mention the perception aspect. “People are impressed by the latest technology,” Just says. “It conveys a sense of knowledge, of competence. Customers now expect more than a hand drawing when they see a design. They expect sophisticated processes. It sets it apart from the many existing pool and spa design companies.”

Last but not least, the advantages in terms of fewer corrections and increased convenience are too numerous to list. Now that sales designers are trained in the process, they do the original CAD design in the client’s home. They then transmit that drawing to Shasta, where draftsmen can pull it off the company’s central server. “There’s no paper in the

process until we print it,” Just says.

Once the draftsman receives the drawing, just one click can digitally remove unnecessary layers in the overall design like bushes, trees, tables, chairs, etc.

We’ve been able to take the complicated software and shorten the learning curve.

“Now we have an actual working drawing for construction,” Just says. “It automatically finds the center points of all the radii and gives you all the layout dimensions. It

computes things like the surface area, perimeter of the pool, deck surface areas and calculates all plumbing and electric runs. It gives you the radius lengths and dimensions of any free-form shape.”

Scale projections, even reductions, are a breeze. When a scanned image, plot plan or land survey is inserted into ShastaCAD, users can scale a plot plan to its actual size and simply trace over the image with accuracy. This saves time, is helpful when working with existing paper drawings, and reduces drawing and permit application time. ShastaCAD scale commands allow for an enlargement or scaling down of any pool design by perimeter or surface area with a click of the mouse, without changing the shape of the original design.

The program also provides a legend of all symbols placed on a drawing. Quantities and descriptions of items placed on the drawing can be exported to a database or spreadsheet. It saves a lot of map errors, and if the sales designer has to make a revision, it’s simple and fast.

Just says Shasta hasn’t really begun

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full-fledged marketing of the program yet. “We currently have a considerable number of companies who have made the investment in ShastaCAD since its inception. We got a big response at the international show in New Orleans and the most recent Atlantic City show.

“Right now, the software is available from Shasta. However, we’re looking at strategies that will allow us to market the software and training by geographic location, thus eliminating the required training trip to Phoenix. The true excitement comes when people sit down to use it . . . 99 percent of the people we’ve sold to have used the program.”

Just declined to give a price point on ShastaCAD but says it’s moderately priced. “We’ll never be the cheapest, but we won’t be the most expensive, either. The program pays for itself in a short period.”

A HISTORY OF INNOVATION

Superior design has been a hallmark of Shasta’s success since its inception in 1966, and is one reason it’s in the AQUA Hall of Fame. It has two design centers — one in Phoenix and one in Mesa, Ariz., which service the new residential pool buyer. The design division is recognized annually for its award-winning pool designs and builds over 3,000 new pools a year. Shasta remodeled over 1,200 pools for homeowners last year. It also has four different centers for supplies that bring the latest innovation and results to the customer. Even the Shasta Web site is varied and comprehensive, featuring everything from state-of-the-art design processes, to pool games for kids, to a glossary of terms.

But the bottom line always has been building pools. Shasta sold 3,065 pools and spas last year, including commercial pools. It has about 600 employees connected with that process and has sold pools to more than 60,000 families since 1966.

“The design process is of great satisfaction to me and all the others in the process,” says Just, who started out as a sales designer at Shasta a couple decades ago. “But we’re a pool builder. That’s how we’ve become so well-known throughout the country. We’ve been very blessed to have great leadership and great people” — vital Shasta components that are very much by design. ~

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