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“By giving our customers the ability to configure drawing sets on the fly, we’ve made their jobs easier and home design more flexible. Technology partners like Avatech make our visions for improved efficiency and service real.”

— Hans Bentzon, Principal
Lindemann Bentzon Bojack
Engineering Company, Inc.
www.lbbe.com



LINDEMANN BENTZON BOJACK BUILDS BETTER RELATIONSHIPS WITH HOME BUILDERS

Firm provides better service, saves thousands of hours with custom solutions by Avatech.

THE ORGANIZATION

Formed in 1994 with engineers licensed in 30 states, Lindemann Bentzon Bojack Engineering Company, Inc. (LBBE), is a leader in structural engineering, permitting, inspection, and construction drawings. With a staff of 60 employees, LBBE handles over 15,000 jobs and prints over 700,000 drawings per year for customers in the home building industry. The company is fast becoming the leading proponent and supplier of whole house design—wherein design, structural engineering, and material costing processes occur simultaneously in the same construction model.

THE CHALLENGES

Most LBBE customers are part of the Top 100 builders list in the United States, including names like: Pulte, Lennar, KB Homes, Beazer, and Ryland. To remain competitive and offer memorable customer service above and beyond the technical aspect of their job, Lindemann Bentzon Bojack continuously looks for ways to enable their customers to handle projects more efficiently and effectively.

One of the problems all large tract or subdivision home builders face is managing the number of configurations each house design can offer, and then efficiently coordinating drawing sets from architectural plans to approved construction drawings. Because LBBE looks specifically for technology solutions that strengthen client relationships, Philip Russo, Senior Applications Engineer at LBBE, knew that if he could create a way for customers to configure complete approved drawing sets, it would reduce their on-site construction costs while improving the service to home buyers.

THE SOLUTION

LBBE designed an in-house time management system that enables them to accurately track projects at every phase. They made this information available via an extranet for clients to access and view—making their work transparent to customers.

Russo called on Avatech Solutions to help customize an application that would organize over 700,000 drawings produced in Autodesk® Architectural Desktop. Avatech’s Software Development Solutions team designed a custom application to get Architectural Desktop’s Project Navigator and Sheet Set Manager to dynamically drive the information into their project status portal, rather than requiring people to enter the information manually.

Russo also wanted a drawing sets ‘log’ for each house design, detailing which drawings made up the final set for an individual project. Avatech’s Software Development Solutions’ Project Manager, Sean Tolodzeicki, worked with Russo to build the drawing

log to keep sheet numbers coordinated and tracks changes. Avatech also built a Sheet Selector application that allows project team members to use an automated project-based method to create Design Web Format™ (DWF) books. The same application also offers batch DWF book creation, so that books do not have to be created individually. The open, compact, and secure DWF file format enables the efficient distribution of rich design data to anyone who needs it.

This customized system allows the engineers to make changes to a drawing and dynamically keep the construction set up to date. All sets are made available to LBBE employees through their intranet and to customers through the extranet, so the most recent drawings are available 24/7 from anywhere.



“These custom solutions, along with others in the works, represent real innovation and offer big benefits to our customers who love it! They feel that we offer them services above and beyond what a regular structural firm would provide,” said Hans Bentzon, Principal at LBBE. “Avatech has helped us work toward our vision of providing whole house design by giving us the custom tools we need to work more closely with customers.”

SIGNIFICANT REWARDS

Streamlined Printing Improves Efficiency

LBBE works with the biggest national builders who produce hundreds of thousands of homes per year. “We print more drawings than NASA,” said Bentzon. Processing 700,000 print jobs per year with manual queuing was a waste of valuable engineering and design time. By allowing for batch DWF book creation at the end of a day, LBBE is saving up to 15 minutes per print job. “The really big timesaver for us is the ability to maintain drawing sets. For example, one house has three different base elevations, and you maintain three DWF books for that project.” said Bentzon. “Before, when a client sent in a change, it might take an hour or two to configure the three different elevation books. Today the DWF sheet selector application performs the task in less than 2-3 minutes. It saves us up to one full-time person’s time per year.”

Strengthened Customer Relationships

LBBE continues to stay ahead of the curve by providing enhanced services to customers. These effective solutions have helped attract some of the largest building firms in the country and LBBE continues to grow. Bentzon says, “By making in-process drawings available online, our customers can see where we are at on a project. This kind of transparency really builds trust and loyalty.” LBBE is growing at 20% per year and may consider opening offices in Arizona, Colorado, and California.

Decreased Construction Costs

A homebuilding company working on tens of thousands of homes per year cannot afford costly setbacks due to the same error being made in each home. By keeping drawing sets coordinated for their customers, LBBE minimizes the

number of costly construction problems that crop up on site due to poorly orchestrated drawings. In addition, LBBE performs value engineering for customers to reduce material costs. “If we reduce the cost of a popular house model by only \$1,000, that could mean a significant return for the big builders,” said Bentzon.

Reduced Time to Design

Bentzon says, “Applying the idea of whole house design, enabled by 3D models, means our teams work simultaneously on a project so that it’s completed in 30 days vs. 90 days—a 66 percent time savings. This means customers who work with us get their buildings up faster and realize return on their investment faster.”

THE FUTURE

Over the next year, LBBE is forming strategic relationships with other companies to strengthen their service related offerings. “The new trend in the housing industry is whole house design, said Bentzon. “LBBE is headed down this road with current and pilot projects underway—leveraging our partnerships and relying on the smart use of technology from Avatech and Autodesk to get us there.”

ABOUT AVATECH

Avatech Solutions is a leading engineering systems integrator, with unique solutions that enable companies to more effectively design, develop, and manage projects, products, and facilities.

We get results with the unique capabilities of our team of industry-experienced professionals—application engineers, consultants and strategists, trainers, software developers, and project managers.

With offices nationwide, we specialize in process optimization, software implementation and integration, standards development and deployment, education, and technical support.

Our expertise is real. And so are the results that we bring to our clients. Avatech can help you succeed, with solutions that align your technology and processes to your organization's goals—for results the way you define them.



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SOLUTIONS®

Altogether Smarter Design.

Corporate Office
10715 Red Run Blvd, Ste 101
Owings Mills, MD 21117
Phone: 800-706-1000
Fax: 410-581-8088
Web: avatech.com

To learn more call 1.800.706.1000 // visit www.avatech.com

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