

Visualization Software

A Great Tool for Improving Operational Efficiencies

By Jim Parrie, Ph.D., CPF

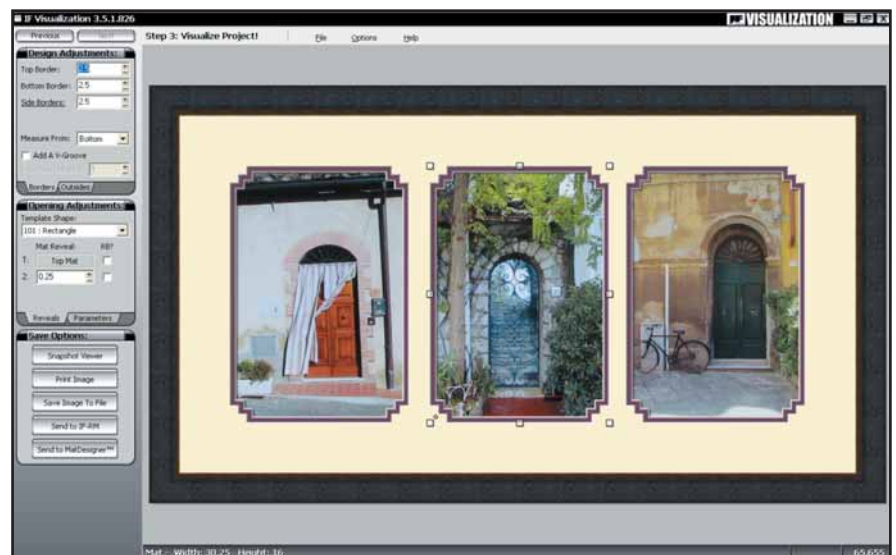
The benefits of increased sales revenue, higher customer satisfaction, and enhanced framing designs through the use of visualization software have been touted in recent years. As the use of visualization software grows and as customers become more comfortable with the use of technology in their everyday lives, production framers that are not using this technology will fall behind their competition.

Retail shops were the first to adopt visualization software, and the early versions were designed primarily for them. As shortcomings of these programs for production operations have been overcome, visualization is now being implemented more frequently by OEMs and chain stores.

Volume framing operations have been implementing visualization software as a way to increase sales and enhance customer satisfaction. Other major operational benefits for volume producers have also emerged. When properly integrated with a company's other software and equipment, visualization software can produce sizeable operational benefits.

Reduced Manufacturing Errors

Manufacturing errors can be reduced by visualization software in a number of ways. First, a robust program should integrate with production software and computerized mat cutters seamlessly. Manufacturing specifica-



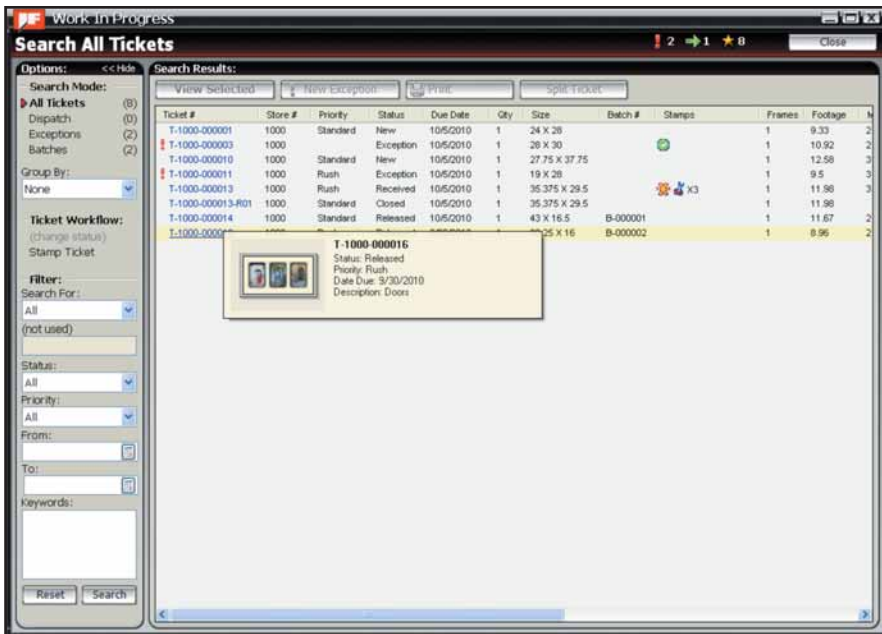
This design project was created in Wizard International's IF Visualization software.

tions should pass from the visualization (and order entry program) to the manufacturing program (sometimes referred to as the production back-end). Sending such information electronically minimizes data entry and other human errors. Integrating visualization and the production back-end also allows multiple users to see a digital image of the item to be framed before it is created and to modify the specifications if needed.

For instance, mat border widths might be entered incorrectly by a salesperson. Or a framer may want to show a customer an alternative arrangement for items in a shadowbox. With an integrated visualization program, manufacturing specifications can be altered, the visualized image adjusted, and all cut lists corrected



A retail ticket was created from seamless integration with IF Visualization. Note that moulding and matboard images do not transfer to corporate or production. These items must be resident images to each database for them to appear. Moulding and matboard images created at a store in a wheel-and-spoke operation will not transfer to corporate or production; only the art image travels.



On the main production WIP screen, you can highlight a ticket and get a thumbnail image and immediate information regarding that ticket.

easily. This ability can save time, money, and customer frustration.

Whoever checks items into production can also see a color image at the check-in (dispatch) station to verify that the artwork being physically placed into production is the correct one before the production software generates cut lists and inventory is pulled. A good visualization program will allow color work tickets to be produced, allowing all production personnel to make

sure that the correct color mats are going on the item.

Will all these color printouts result in adding significant cost in the form of more color cartridges? First, look into less expensive printing methods than inkjet. But even then, it costs less than 3 cents to print a color work ticket. Can you re-cut a mat for that amount? For large operations, it is less expensive to strategically place a color monitor or two for quality control purposes. Whatever method you choose, you can reduce mis-cuts and frustration by having a digital image of the item available to everyone who will touch it.

The mounting department will love visualization because they get a scaled image of the placement for each item in a shadowbox or a multi-opening mat printed on the work ticket or shown on a computer monitor. They no longer have to rely on bad handwriting and out-of-scale drawings to mount complicated pieces. In addition, customers will have copies of their designs in color right on the work tickets. That way, if they tell you later that they did not want the baseball next to the hat but next to the photo, you can show them the color image on the work ticket. This is a great way to increase customer satisfaction and reduce potential conflict.

Most visualization software can measure the artwork to be framed, but few can pass that information on to the production department. Visualization

measurements can be remarkably accurate—to less than a 1/16". There are a variety of methods used by visualization programs to calculate dimensions. In one system, the software measures the distance from the lens to the top of the counter or worktop and associates that distance with a number of pixels per inch. When an item is scanned, the software counts the total number of pixels. So the software is actually accurate to within one pixel.

This information is less valuable if it only appears



On the main production WIP screen, you highlight a ticket, then double click or select View to open the status box of the ticket. Specific information, an image, and current status are available.



On the status screen above, click Edit to see the entire ticket as created by sales. If the feature is set up, the pricing shown will be the price to produce this order (not customer pricing). Edits to this screen by production will be recorded in the ticket history for production and for sales. Customer pricing will be unaffected by any changes unless approved.

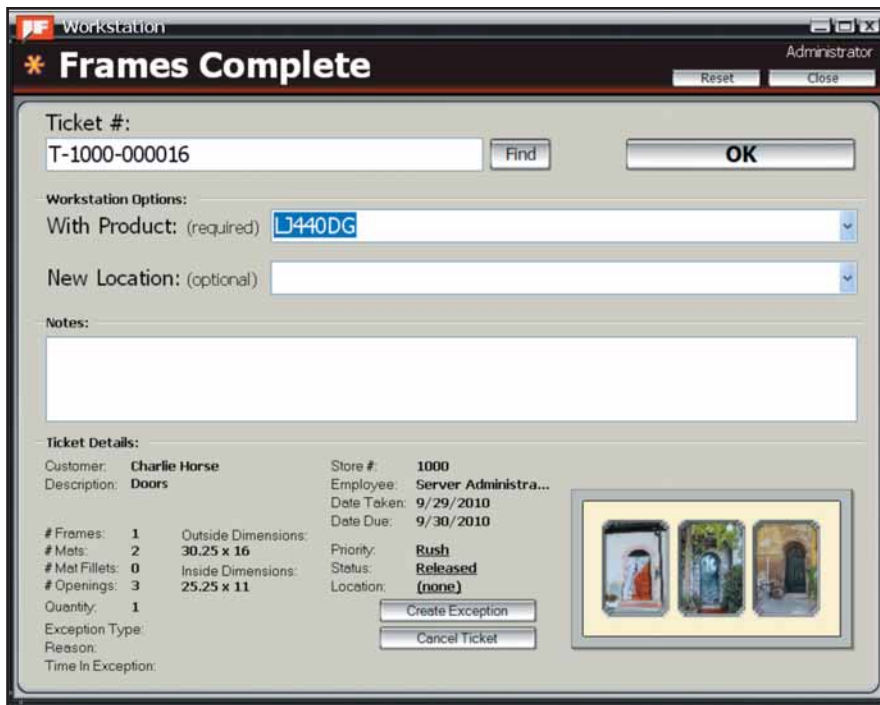
can reduce production costs by reducing the need for re-cuts and constant re-measuring.

Some visualization software passes an image of the mat to be cut to the CMC showing not only mat design but also mat color. This helps reduce color errors, especially in factories where English may not be the primary language of the staff. Using an integrated CMC will provide an operator with the flexibility to adjust errors made by salespeople. Too often in volume operations, CMC operators have to blindly cut mats based on a work ticket that may or may not have a drawing of the design. Integrated visualization software lets a CMC operator see a digital image of what an entire project should look like when complete and provides the ability to adjust for errors made by sales staff.

An integrated visualization program will affect production cycle times. Cycle times are an important part of CMC efficiency. When you research CMCs and production software, you should look at the cycle time—the amount of time it takes to complete an entire process such as cutting a mat. Cycle time may include retrieving an order from the production software, passing that information to a CMC's operating system, placing the mat on the cutter, initiating the cut cycle, making the actual cut, clearing the cut mat and the debris, and getting ready for the next item. When you purchase a seamless, integrated visualization package, a CMC operator should be able to scan a bar code to bring up an image of the mat, displaying not only the design but also

on the work ticket or your CMC. By using an automated measuring system that passes the calculations directly to the production system, you can reduce the mathematical skill level of sales and production personnel. No more fretting over the possibility that potential hires cannot read a ruler or convert decimals to fractions. This system

the color and specifications, and then click “Cut.” Any additional steps will increase the cycle time. If you choose a system that requires added steps, then you must calculate the cost of those increased steps and adjust your manufacturing costs accordingly. Once you have calculated increased costs from increased cycle



All workstations have specific information and an image of the order available on the production workstation screen.

time, you can decide if they are offset by any added features of the program.

Faster Turnaround Times

For volume custom framers, matching artwork to a work ticket and to the correct components can be time consuming because of inadequate or missing item descriptions. Language barriers can slow things down, too. A good visualization package for volume framers should pass an image from sales to production both electronically and via hard copy. By having an image on the work ticket, production employees can see the exact color and order of the components to be assembled. Just as importantly, they can see which image should be assigned to which components. This helps minimize the chance that production staff will put the wrong item in the wrong frame or, worse, ship the wrong picture to the wrong customer.

Turnaround times are decreased because the mounting department will be able to mount complicated groups of items with fewer calls to sales and customers. Production times and errors can also be reduced on complex or problem items. When production has questions, they can call the decision-maker and talk while all parties view the same digital image. If production wants to make a change, a new image can be visualized and e-mailed to the decision maker in minutes. For chain

operations, this saves multiple phone calls between production, sales, and the customer. It can also prevent having items returned or having a customer select a different framing package, requiring the project to start all over again.

Reduced Bidding Costs

Just a few years ago when you were bidding out a large commercial job, you would frame entire items as samples and ship them to the designer or customer. This could mean having a customer wait several weeks while you brought in all the materials, incurred enormous shipping and crating costs, and then went through a lot of back and forth with the designer. Those days are gone. Today all you need is a jpeg

or bitmap file of the artwork, and within minutes the designer can see your frame designs on his/her computer anywhere in the world. You may send a variety of choices and price ranges. In less time than it would take to cut, join, mount, and fit one piece, you can design and price dozens of items and e-mail them to a designer. Production framers are now using visualization software for bidding volume jobs. While their competitors are busy ordering samples to airfreight to a designer, these companies have already designed and priced the entire bid. This not only wows customers but also saves a volume framer hundreds and even thousands of dollars in operational costs.

More and more companies are using web-based conferencing through Skype, WebEx, GoToMeeting.com, etc. combined with visualization and pricing software. This allows you to see the customer or designer face-to-face if you wish, collaborate with the end user, and show your work without ever cutting a mat. Web-based conferencing services are very reasonably priced; you may want to try a test run using a free trial period or free service. (There is a reason free services are free, you get what you pay for.) A good service runs about \$40 to \$50 a month with unlimited usage (not counting long distance charges).

The benefits of using web-based visualization as a sales tool are enormous. It is not just for clients across

the country but also for those a few miles away. It saves the time of driving. You can also schedule a meeting at a time that is most convenient for everyone. It puts you a step beyond the competition, and it can save you money.

Web-based conferencing combined with visualization software will let you show a designer artwork, frame designs, and pricing. You can even show what the artwork will look like when it is done and hanging on a wall. It provides a level of professionalism that will surpass many of your competitors. And there is no more FedExing samples and running around wildly, trying to get a bid put together.

Most volume framers with salespeople often create samples of pre-framed art that management is considering for the next selling season. Some chain operations do not even ask their salespeople but just ship the art and the salespeople have to deal with it. By using visualization software, you can send several designs to selected salespeople to get their feedback and buy in to the designs without ever making a sample. You may even allow them to use the image to create their own design ideas. This is a quick, inexpensive method to minimize any pre-framed art that won't sell.

Reduced Shipping Errors

Another benefit of visualization software is that the image printed on the work ticket can be matched to an item being shipped. A shipping department can quickly verify that the items are correct and even that the components are correct before a shipment goes out. This is one more level of quality control that can help improve customer satisfaction and reduce costs. Shipping costs are cut because there's less of a chance that the wrong item will be shipped to the wrong customer. Another option is to print an item's image directly onto the shipping label. One company combines the packing slip and shipping label all on one 8.5"x11" label. The packing slip is the bottom half, which includes a digital image of the item. This is placed in the box with the item. The top half of the label is placed on the outside of the box. With this system, the company's "mis-ship" rate was cut by nearly 100 percent.

Reduced Work Hours

A fully integrated visualization package allows you to visualize, price, and produce items in volume seamlessly. This reduces the time needed for measuring, re-spec-

Commercial Framing Series

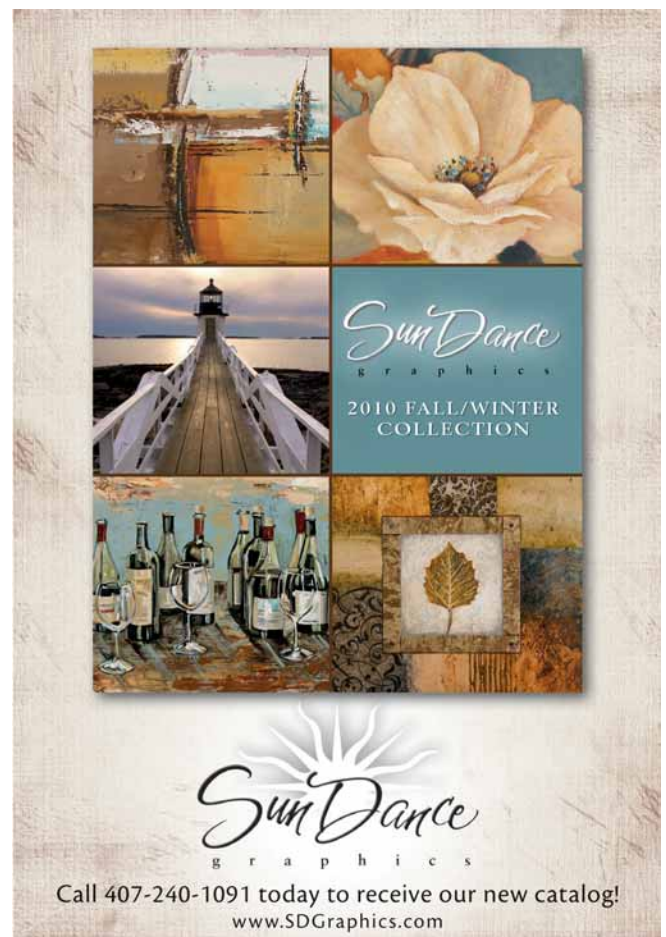
Advanced business classes for production framing managers, owners, and industry professionals who want to take their companies and operations to the next level.

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ifying items, committing them to production, and making cut lists. As work hours are reduced, costs are reduced. The skill level required for various operations are also reduced because measuring items and difficult calculations can be minimized or eliminated. It is not as necessary for salespeople to spend a lot of time calculating the size of complex multiple-opening mats because the software does it automatically. And if a salesperson makes a slight mistake when aligning openings or placing items, the production department can adjust the manufacturing specifications right at the workstation.

Reduce Customer Claims

If you produce enough items, at some point you will damage an item. And if you are in the framing business long enough you may have a customer try to pull a fast one. The item will have damage that the salesperson did not list on the work ticket, but a customer will swear up and down that the damage was done by your operation. Visualization provides a digital image of the item just prior to pick up or shipping. Some production facilities save digital images of all damaged items for an extended period of time in case of customer complaints. This provides an added layer of protection for a framing company and helps improve customer satisfaction.

There are many other money- and time-saving opportunities with visualization software. Most of the savings require the visualization software to be integrated with pricing software, production software, and framing equipment, especially CMCs. It is an important piece of technology that makes it affordable to revamp a production system all at once. Given current economic

conditions, the probable bottoming out of industry sales, and the evolution of true automation for picture framing, now is one of the best times to invest in visualization software. ■

Jim Parrie, Ph.D., CPE, a 30-year veteran of the framing industry, has owned and operated small frame shops, galleries, and wholesale operations to high volume OEM facilities. Currently, he owns Millennial Technologies & Consulting International, a consulting firm to high volume framers, retail chains, and manufacturers throughout the world.





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