

Its not that Dave Nigbor doesn't like people. He just prefers to not incur employee related manufacturing costs that could be reduced or eliminated with the integration of computer-driven product costing and production software systems into his Milwaukee area company.

But who can blame him. Cutting costs is a primary key to success in any industry sector.

Nigbor is president of Lannon Millwork, a 20 year-old architectural casework manufacturing firm specializing in custom institutional and commercial interiors. From his beginnings as a small residential cabinetmaker to his current status as a major regional manufacturer of laminate casegoods, Nigbor has strived to be a lower cost producer, with a strong dependence on high tech machinery systems and software.

"Eight or ten years ago I had more employees than I do now, even though I was

doing a lot less business," Nigbor explains. "Now, with the addition of computer-linked panel processing equipment and other pieces of extremely efficient machines, we've significantly reduced labor costs, while at the same time improving overall volume and delivery."

But he says you first have to correctly identify your costs before you can actually reduce them. That's where a new cost estimating and inventory management software package, called **takeoff<sup>TM</sup>** from People Logic Software Corp., plays a major role at Lannon Miliwork.

Nigbor explains: "We had been using an extremely time-consuming spreadsheet system of determining costs and pricing jobs on a per box basis. Plus it was not as accurate and consistent as we would have liked and we weren't handling our raw materials inventory in the most efficient manner. Added to that, overtime on certain jobs was too high, particularly on the

extremely custom jobs."

Now, after just one year of using Take Off, Nigbor says he's generating bids 20-25 percent faster, and he's more accurately estimating all costs and, most importantly, margins. In addition, overtime has been reduced and raw materials inventory is under control.

## Assigning cost values

What Take Off does is bring together multiple components of a job, from labor and materials pricing, to scheduling and ordering. It can integrate seamlessly with the major software packages like Pattern Systems, as well as optimizing software like Holzma's Cut-Rite

Currently, Lannon is linking Take Off with Pattern Systems software. He is also utilizing a barcode system which links a Holzma HPP 11 CNC panel saw with a Weeke BP12 point-to-point machine. Edgebanding is handled with a Brandt KD99 single-sided edgebander.

Ninety-five percent of product is constructed out of particleboard. Assembly is dowel construction using a Ritter case clamp.

Take Off was developed by woodworkers for wood-workers. It takes a parametric library approach to estimating. Unlike most spreadsheet or database approaches to estimating where you are required to define prices for each different size of a product, **takeoff** enables users to define products a single time, with virtual dimensions, and specify precise dimensions at "take off time.

'With this approach,' Nigbor says, 'we're able to get accurate material requirements even if the size for every item on the project is different. Plus, add-ons like reception desks and curves are no problem because we can customize any product."

With Take Off, materials are assigned to specific groups. For example, materials

used for the construction, finish and hardware of a product can be defined in one or more groups. This gives the user the ability to quickly do "what if scenarios with different product combinations and see what the cost differences would be for a particular project.



At the head of the manufacturing scheme at Lannon Miliwork is a new Holzma HPP1 1 GNC panel saw which generates a barcode label with all manufacturing information included.

## Labor, material tracking

As mentioned earlier, custom product options don't pose a problem. At the product level, there is often a variable which can be defined as "options." The user can define separate library items for a base cabinet, for example, with one, two or three shelves.

By defining adjustable shelves as a product option, you again only need to have one library item with an option for the number of shelves required for the cabinets.

The new software also generates precise labor and material requirements for a project. Because of the exactness of the parametric approach and the opportunity to define material waste factors, it's possible to determine the exact labor and material requirements at the time the estimate is completed.

Up front, the system generates a labor table, a total labor summary, and a total materials summary for each job, each giving unit costs and total costs. Labor can be broken down into sub-categories for shop labor, site labor, installation labor and separate values for shop processes labor which can include tasks like handling, assembly cutting, edgebanding, machining, etc.

Normally companies need to wait until a project has been engineered before they can start planning their purchasing and production. This creates scheduling issues that could be avoided.

"This feature is particularly important when were ordering sheets of high pressure laminate, Nigbor explains. "If we order ten or 20 sheets too many of a specific color or design, then we're inventorying some costly material that we may not use for quite some time."

Relative to labor estimating and scheduling, he says a benchmark labor value is taken off the edgebander. This helps get a better handle on work flow and allows workers to be assigned where the work is.

"Probably the most time-consuming process happens on the front end when you're loading your libraries," Nigbor says. "But after that's done it's just a matter of accessing the right files:'

He says the learning curve for Take Off was one to two weeks.

"It was really quite easy to learn,' he says. "But we've been moving in this direction for a long time and we were ready"