



A Quick R.O.I. at Michael Day

Each quarter, we'll feature a Q & A on opportunities or challenges that affect your business. This issue, join us as John Weaver discusses how he met the challenge of controlling inventory at Michael Day Enterprises.

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Q: What was your immediate challenge at Michael Day?

A: When I took over as IT director, the company wanted to get our entire inventory under control and implement a new bar coding system; I was given just over a year to do it. We're a custom compounder, with about 12 million pounds of inventory in finished and raw goods, using over 1200 different pallet locations, in a warehouse that spans five acres. Our biggest issue was inventory accuracy – all our tracking was basically being done on paper, and we were struggling with a 64% accuracy rate. We work with up to 500 different materials, shipping out 200,000 lbs of product every day. The margin for error was enormous. To regain profits, we needed to provide quick turn-around time for our customers, sending out accurate and timely shipments.

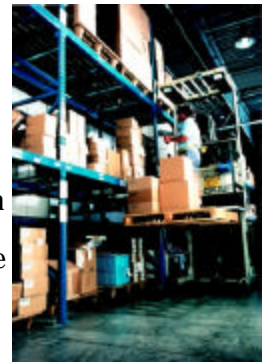
Q: Were there any unique concerns you were addressing because of your products being process-based versus discrete?

A: Yes, we needed a system that would identify different characteristics, such as wet, dry, density, weight, etc., because we are constantly modifying formulas to better suit our customers' needs. Each box in our inventory could have ten different allocations, depending on its usage. Without a way of accurately accounting for all this, we couldn't mark specific contents in boxes as being saved for a particular customer's order.

The system we were working with before just didn't do everything we needed it to do. Bob Brennan was out here helping us with another project, so I asked him how IMS could help us automate tracking our inventory within the bar coding system in cooperation with TMM.

Q: Sounds like you had your work cut out for you. How did you manage this project?

A: I broke it down into four phases, with my immediate concern being the physical inventory. We wanted serialized barcode labeling, meaning we had to re-label every box, every location. Before, we relied on hand entered information, sometimes recorded and sometimes not; now we use a unique license plate number for accuracy. Second phase was Receiving: labels were automatically printed out using a browser by PO number, with all the information right there. A truckload used to take 2 hours to receive, now it takes ten minutes. Third phase was Shift Reporting, where we really saved on time. The last phase was automating the Shipping Module, which no longer has



Scanning in the warehouse

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Bar Coding 101: Hardware Selection

Implementing a customized solution consists of two parts, hardware and software. We'll discuss hardware first, and continue with software in the next issue.

Hardware selection can be a daunting process. As a distributor of different brands of bar coding equipment, IMS will help you with the selection, installation and configuration of the hardware that best serves your needs. We'll make sure you have the right tools for the right job.

If you choose to print your own labels, you will need to determine the number of label printers you want for label generation. Depending on your budget and floor configuration, you may want a printer at each production line, or share a printer among multiple production lines. Since the labels are being printed on an as-needed basis, it's important to locate the printers close to where the labels will be in use.

Next step is the data collection equipment. This can be a fixed terminal with a wire that attaches it to the network, or a radio frequency handheld device that is portable, for example an Antares scanner. Fixed scanners are more economical where portability is not required, such as for production reporting or label generation. RF, or radio frequency handheld units, are best for inventory control, and shipping and receiving applications, where operations take place throughout your facility and ease of portability is a key factor. We will help you determine the number of each type that best suits your needs.

Both label generation and data collection require servers. These are computers dedicated to the label generation software and the bar coding data collection software. We will select servers that are appropriate for your labeling and data collection requirements. Depending on your labeling volume, and the equipment currently available to you,

you may or may not need a dedicated label server.

After determining your equipment requirements, we move on to the site survey. RF equipment has a defined range and there must be an access point or receiver in all the areas in which you'll want RF coverage. We'll arrange a site survey to determine the number and location of these receivers in your facility. The manufacturer needs to do this survey in order to guarantee that the equipment will work properly in your environment.

Now your business is ready for the implementation phase. The manufacturer of the equipment will send a technician to install the equipment at your site. IMS will also be on site to configure and to test the equipment once it arrives.

Each printer, fixed data collection station and access point (receiver) requires a connection to your computer network and AC power. If you have a large facility, you may run into standard network wiring's maximum length restrictions. Fiber optic runs can be used for equipment located more than 100 meters from your main computer facilities. Determining which method is best for you is an important responsibility for your company.



Once the hardware has been selected, delivered and installed, you can begin implementing the software, which we'll discuss next time. **For more information on hardware pricing and availability, please call for our catalog and Cost Estimator Worksheets** or check out our website www.integratedmfg.com.

Next issue: Customizing, Testing, Training and Going Live with your software.

Equipment – Scanners

Have you ever been to the supermarket and watched the cashiers try in vain to scan your purchase? Bar code readers work by emitting light that bounces off the label and reflects back to the reader. The reflected light pattern is the opposite pattern you see on the white and black bars. A successful scan occurs when the reader can decode the light pattern.

In an industrial setting, a number of factors must be considered when deploying a bar code reading system.

First, you need the correct laser scanner: Normal Range scanners read labels at an arms-length distance, while Long Range can work up to 25-30 feet. High Density scanners are used for very small labels at close range, and High Visibility scanners are employed when working in direct sun light or other bright circumstances.

You also need clean, clear labels to scan. As discussed last issue, modern Thermal

Transfer Printers do an excellent job of printing labels. Label size, bar code type, required resolution and the ability to print quality graphics all affect the printer selection. Matching the printer's capabilities with your label requirements is critical to success.

Next, the user's Angle of Attack from the scanner to the printer is also a factor. This concern is most often associated with Long Range scanners. Let's say a user on the floor wants to scan a pallet that's 20 feet up above him: if the angle is too drastic, the laser light simply bounces off the label, instead of returning to the scanner. Sometimes pure physics can ruin our best-laid plans.

Finally, we consider the bar code X-Dimension, the size of the printed label. In general, the larger the label, the easier it is to scan. We'll cover more on this important aspect in our next newsletter.



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to be manually typed.

Q: Good input from the people most affected by a system is crucial. How did that work?

A: After the initial design, I formed a committee to ask about what everyone wanted. It's important to listen to ideas from employees who will be working with the system every day. When IMS was out on the floor, people would come up and ask for specific solutions and offer great ideas for more requirements. IMS would program it right then and there, so we could instantly test it and get people's reactions. We made at least 10 changes on the fly, it was great.

Q: An integrated system like this can be expensive. Did you justify the cost?

A: Absolutely. We already had the equipment in place when we initiated the project, so we were able to see a return almost immediately, after the first month. The biggest savings were in the sheer reduction of man-hours. It's not just the streamlined staff and no overtime, it's the opportunity cost as well. Now our employees have time to work on new projects that will further help our increased productivity, such as moving materials into segmented rows for even faster access.

Q: In your opinion, what is the most important factor in Michael Day's success?

A: You have to get a handle on how to make your inventory work for you. More and more, customers are asking for help managing their own inventory. It doesn't look very good if your company isn't setting a great example. A successful business controls its own inventory, instead of letting the inventory control the business.

Our thanks to John Weaver for talking with us about the successful bar coding plan implemented at Michael Day Enterprises.



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