



Innovations at CMP

Each quarter, we'll feature a Q & A on opportunities or challenges that affect your business. This issue, join us as James Hickey talks about Custom Molded Plastics' use of bar coded data collection to achieve their goal of expansion.

Services Summary

- ◆ Wireless Networking
- ◆ Bar Coding
- ◆ Automated Data Collection
- ◆ Web Enabled Business Applications
- ◆ Data Solutions
- ◆ Technical Workshops
- ◆ Business Process Reviews

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Q: CMP has experienced tremendous growth. You initiated a bar coded data collection and labeling system right from the start of your business plan to expand. What were your goals?

A: The initial objective was to capture the numbers of the goods produced, but it has further evolved into areas of inventory control, shipment accuracy, and other tools for the distribution process. Most major retailers today demand compliance with their choice of bar coded labels. To remain competitive and take advantage of these markets, we knew we had to use bar coded labels. You have to meet your customer's requirements: they can say 'either get your technology up to speed or we'll find another vendor partner who will.' We knew we wanted to expand, and the only way to stay on top of things was to implement a better data collection system. DTR recommended we call IMS to work with us and help facilitate the process for implementing the systems required for radio frequency and bar coding.

Q: Many companies have come to view charge backs from a retailer as the high cost of doing business in those markets. How does the shipping and ASN labeling module affect your shipping accuracy?

A: It reduces the occurrence of those charge backs by making sure that the

serial numbers on the labels match the 'license plate' bar code on the pallet. It catches any errors before you ship. There is a one-to-one relationship between the ASN label produced and the license plate that is shipped.

Q: Why was inventory tracking so important at CMP?

A: Well, with over 35,000 pallet locations you really need to know exactly where everything is at all times. Our finished goods warehouse is 351,000 square feet.



Pallets being loaded in a warehouse

Q: The sheer size and diversity of products at CMP presents a formidable challenge for warehouse management. How are you using automated data collection to control inventory?

A: We use a combination of the Location Look-up feature on the IMS menu and DTR's Location Reports to identify the correct placement of pallets in the warehouse. The internal tracking label provides a unique ID, identifying

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Bar Coding 101: Data Collection

Using fixed or hand-held scanning devices, bar coded data collection increases the speed and accuracy of data that was previously collected manually. Here are six examples of how bar coded data collection can help your business:

Receiving Scanning purchase order receipts catches any errors immediately. You can verify that the correct *item* and correct *amount* are received, and that the vendor has sent them to the correct *location* if you have multiple facilities. Bar coded receiving also provides real-time visibility of raw material and purchased parts availability. You know instantly, at any time, whether you have the necessary materials to start production.

Shift Reporting If you're using process monitoring, you already know the advantages of automatically generating shift reports. Bar coded shift reporting creates real-time production information, with immediate access to inventory on each shift yet uses far fewer man hours – information is scanned in right at production, instead of keying it in afterwards.

Inventory Control An accurate inventory greatly enhances your scheduling and planning capabilities. Knowing exactly how much you need in raw materials to satisfy customer demand reduces safety stocks and overproduction. Ask yourself, '*Does my business really need more warehouse space, or just better inventory control?*' If you're using DTR scheduling and MRP, it's important that you have accurate inventory information. Bar coded inventory control helps you reach that goal and insure your success in other areas of TMM.

Shipping Nowhere is accuracy more important than in shipping. You can use Picking documents (location information on Ship Advice) to direct your shippers more effectively, resulting in a more efficient use of manpower and facilities. A printed inventory report is only accurate

for a limited amount of time. By using real-time picking location information, your business can ship on a 7 x 24 basis. Most importantly, bar coded shipping maintains high levels of customer satisfaction by verifying the item and quantity being shipped. One of our clients has achieved near 100% shipping accuracy -- a critical advantage in today's highly competitive market.

Physical Inventory Manual physical inventories are a very disruptive process. The faster you can take an accurate physical inventory, the sooner you can resume full operation; bar coding reduces the downtime. If you use serial or lot tracking, it may be physically impossible to do a physical inventory in a reasonable amount of time *without* bar coded data collection.

Cycle Counting Would you like to do away with time-consuming monthly physical inventories? A bar coded cycle counting program can help, by allowing daily verification of inventory. This feature counts the high-activity items most often to verify and control inventory accuracy and catch any errors quickly. By keeping a log of those adjustments, you can track performance, often eliminating the need for monthly/yearly physical inventories.

Bar coded data collection insures a more streamlined and efficient operation for your business, giving your company an increased advantage in today's competitive global markets.



Our next issue will continue with the Implementation phase of bar coding.

Equipment – Printing Labels

Our last issue reviewed bar codes and the software used to design and print them. Now let's discuss the bar code printer itself. **What type of equipment is necessary for printing bar coded labels?**

Dot Matrix printers were once used to turn out labels, but their noise and marginal print quality soon gave way to Laser printers. The quality of laser print is far superior to the dot matrix output. Today, a resolution of over 600 dots per inch (DPI) is typical. Label stock is usually a pre-cut sheet of labels, awkward for large runs. Some printers require a special font to be used to enable the bar coding capabilities.

Both Dot Matrix and Laser printers are general use printers. As such, they are not designed for enterprise-wide label printing requirements. For the tough jobs, we use Thermal Transfer printers. These are specialized devices designed specifically to print labels. They normally have a width of either four or six inches and can

print a label up to two feet in length. At a minimum, they produce labels with a resolution of 203 DPI, which is sufficient for most standard labels and bar codes.

The label stock is either rolled or fan folded in quantities of hundreds or thousands. A ribbon of wax is used to melt the image of the label onto the label stock. Thermal Transfer printers treat the entire composite label as a single image.

Multi-dimensional bar codes, like the bull's-eye style used by UPS, require a higher resolution, which is available on certain models. Other accessories include Label Cutters, which cut a label to size when printed, and Take-Up or Rewind Spools to collect large print jobs. For truly industrial requirements, nothing beats a Thermal Transfer printer.

Our next issue will discuss bar code print quality and how it relates to scanning.



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the contents of the pallet and its location. With a unique label, the box is scanned correctly when it gets moved instead of relying on the employee to enter the correct information. We're now using a new feature that IMS helped implement, which makes partial pallet shipments much easier to handle. If a customer only wants 8 cartons on a pallet that holds 12, we can now generate two separate bar coded labels and remove the inventory from the original label in one process. The software prints out a correct serialized label for the 8 needed, and another serialized label for the 4 remaining ones. It also deletes the inventory quantity of the original label so there is no additional administrative efforts placed on inventory control. Down the line, we're looking into having the software suggest the best location to move items, based on certain configurations of the pallet fitting into the best slots.

Q: CMP exploits many different technologies: labeling, data collection, hardware, networking, TMM, and EDI. What were some of the challenges in keeping it all integrated?

A: We think that our people should know not just their own jobs but a little bit about everyone else's around them. We also believe in a lot of testing: with IMS, we check the programs for mistakes that could be made, how different people might try to do things, and fix any areas of potential error. You try to stay one step ahead. It isn't a simple thing, bringing in a new customer with a different set of requirements on top of all these interactive systems; because IMS has a lot of experience with DTR, that probably helps them solve some of the problems more easily.

Q: What's next for CMP?

A: I think we've only scratched the surface. I'd like to expand on the data collection system to have it suggest pallet storage placement, handle work assignments and shipment scheduling, and produce reports that lets us see what work is being performed, as well as how much work and what type of work is performed by each employee. It's important to know what you're doing right as well as where you need to improve.

Our thanks to James Hickey for talking with us about the innovative solutions being used at Custom Molded Plastics.



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Enhance your DTR™ Software System With These Add-On Modules For TMM™

ASN Shipping System: *A complete turnkey system that includes hardware, Label Generation software, and Label formats allowing you to quickly comply with your customers' EDI shipping.*

Requirements: TMM™ 6.8 or TMM™ 8.9 with EDI add-on
Radley EDI Translation Software
TCP/IP Network

UPS World Ship Interface: *Allows a seamless interface between TMM and your UPS World Ship software, passing shipping information from TMM to World Ship and returning Shipment Tracking information back to TMM.*

Requirements: TMM™ 6.8 or TMM™ 8.9
UPS World Ship Software
TCP/IP Network