Case study

Denco Data

One Billion Labels and Counting

At a glance

Industry: Healthcare

Application: Prescription Fulfillment System

Innovative solutions help speed mail order prescriptions

Denco Data is a data engineering company that specializes in printing system development. In the past 30 years, its business has evolved as technology has changed – from selling computer components to the military and universities to supplying bar code printing systems. In all the iterations of its business, Denco has specialized in finding simple, elegant solutions for complex problems.

Denco's latest innovations are focused on designing and manufacturing printing systems and automatic label applications for material handling systems used by large, mail-order pharmaceutical companies. With giants like Kaiser Permanente, CVS, and the U.S. Veteran's Administration taking the lead, the mail order fulfillment of prescription drugs is expected to grow to be a $4.6 billion industry by 2003. These large mail order facilities run 18 hours a day and print more than 60 million labels a year each to keep up with the demand for low-cost maintenance prescription fulfillment. And driving the cost controls are the ultimate customers: HMOs and union benefits plans.

Originally, these facilities were anything but automated operations. "Everything was done manually at these large pharmaceutical centers," said Chuck Osisek, president of Denco Data. They couldn't get the volumes up putting labels on by hand, so our job was to find unusual and unique ways to automatically do it."

Fast, intelligent printing

Denco's approach centered on finding a fast, intelligent printer that could do more than print labels. They turned to Intermec's EasyCoder 501 series. "The 501 series printer can be used in much more sophisticated ways than just a printer," said Osisek. "It has the ability to turn lots of things on and off under logical control, so it can work like an industrial control as well as being a printer."

In a mail order prescription fulfillment system, every label printed is an original. The average fulfillment system prints labels for 40 containers per minute with 20 fields of text and graphics changing on every container.

"When we tested the 501s they were so far ahead of anything else that was available," said Osisek. "It's hard to get people to understand that it's not the print speed; it's the formatting speed. This is a backwards manufacturing

Intermec®

process and every one is custom filled, first label out. The 501XP printers are fast and incredibly reliable."

From manual to automated

Denco was tasked with turning a very labor-intensive process into a streamlined, automated system. When the mail order prescription centers were first developed, a worker would stand next to a printer and wait for a label to be printed. The worker wrapped the label around the bottle and put it in a box. The box traveled down to 300-400 automatic pill counting stations. A worker would read the prescription label, find the correct pill counter station, then hold the bottle under the counter as the bottle was filled. Then they placed the lid on the bottle and sent the prescription down the line for final packing. It took 20-30 people to move bottles through the system.

Denco's solution manages the printing at both ends of the process as well as automates the container's movement in between. When the data entry system sends down the prescription data, the EasyCoder 501XP prints the label and triggers a Denco-developed plastic transport carrier called a "puck" that has an embedded RFID tag in the base with an encoded serial number. The prescription and the puck are then linked together in the system so as they travel down the conveyor the system automatically knows what actions to take. The Denco system virtually eliminates the need for human intervention until the prescription is ready to be placed in the mailing envelope.

At the end of the system, the final documents are printed. These include the shipping label, patient information document, and reorder form.

Cost reduction

A complete system, which includes 10-75 printers, costs $5–$10 million and take three-to-six months to install. But the ROI is virtually immediate because it's the only efficient way to reduce the cost of filling maintenance prescriptions – and that savings is as important to the consumer as it is to the HMOs.

The printer portion of the system simply drops into place within the system, so it's rare that Denco is actually called to an installation. "There have been enough installed that they're almost like plug-in modules," said Osisek. "They can change out a printer in about two minutes and usually keep a couple spares there so they don't have any downtime."

In-store systems

Denco has also designed smaller systems for large, retail pharmacies. These systemsare intended for stores doing 300-400 prescriptions a day. "Almost every food market has a pharmacy and large chains like Fred Meyer or Kroger's have a regional refill center for the maintenance prescriptions," said Osisek. "They supply the overnight prescriptions for many stores so they don't have to hire an additional pharmacist in every location."

They're also designing systems which can dispense blister packs, pre-filled bottles and pill strips designed for senior care centers. The bottom line for Denco is finding smart ways to solve problems that no one else can solve.

"Whenever we see a problem we have to fix it," said Osisek. "When the whole thing started, we came up with the initial concepts of how to do the printing and handling. We designed the puck-shaped, RFID trackable carrier to improve the delivery of the prescription container on the conveyor. There are now 500-600 printers installed in these systems and billions of labels printed and the need is growing because heath care systems are working to reduce prescription costs while still maintaining high customer care."

North America
Corporate Headquarters
6001 36th Avenue West
Everett, Washington 98203
Phone: (425) 348-2600
Fax: (425) 355-9551

South America & Mexico
Headquarters Office
Newport Beach, California
Phone: (949) 955-0785
Fax: (949) 756-8782

Europe/Middle East & Africa Headquarters Office
Reading, United Kingdom
Phone: +44 118 923 0800
Fax: +44 118 923 0801

Asia Pacific
Headquarters Office
Singapore
Phone: +65 6303 2100
Fax: +65 6303 2199

Internet
www.intermec.com
Worldwide Locations:
www.intermec.com/locations

Sales
Toll Free NA: (800) 934-3163
Toll in NA : (425) 348-2726
Freephone ROW: 00 800 4488 8844
Toll ROW : +44 134 435 0296

OEM Sales
Phone: (425) 348-2762

Media Sales
Phone: (513) 874-5882

Customer Service and Support
Toll Free NA: (800) 755-5505
Toll in NA : (425) 356-1799