

THE BACKGROUND

National Crane is a manufacturer of truck-mounted hydraulic cranes, with headquarters located in Waverly Nebraska. Founded in 1963, the company has been a MAPICS user since 1986, when it purchased MAPICS II to run on the company's IBM System 38 computer. According to head of Information Systems at National Crane Corporation, Mike Everley, MAPICS at that time was one of very few modular back office and manufacturing software solutions available that ran as a seamlessly integrated package on the midrange platform.

Currently, National Crane runs MAPICS XA on an IBM iSeries (AS/400). Besides the accounting-related functions, the software incorporates such vital manufacturing modules as inventory management, production control & costing, material requirements planning, customer order management and purchasing - all form consumers at some point.

THE PROBLEM

Everley long ago accepted the fact that the multi-part forms his company used would sometimes jam in printers, as just a part of doing business. He also accepted the fact that print quality could be better, that distribution could be slow because of unavoidable post-processing activities, and even that accounts receivable checks could arrive with the incorrect amounts because the customer couldn't read the invoice.

As head of Information Systems, he knew that his situation was no different than that faced by his counterparts in most companies, where pre-printed multi-part forms typically have been the norm. It was possible, he also knew, to generate laser printed forms from electronic templates, but when he had investigated the e-forms alternative, he had found costs to be prohibitive - "horrendously expensive" - with no way for a small to mid size manufacturing company to generate a decent project payback.

"Until a few months ago, virtually all of the forms used at the company were printed in the computer room on one shared printer," Everley recalls. "We ran them through a burster, sorted them and then distributed them manually. You would finish a print run with one form and you had to start a new run with a new form. We were changing forms off and on all day long."

THE SOLUTION

The tedious process took a turn for the better when Everley attended the annual MAPICS user conference. Among the exhibitors at the conference was ACOM, who had recently

become a MAPICS business partner, and who develops the award-winning EZeDocs/400, EZPayManager/400, and EZDesigner/400 software suites (formerly known as EZPrint/400).

EZeDocs/400 is an electronic document printing solution, and EZPayManager/400 is a MICR-Laser check printing solution - both of which were developed specifically for use in the IBM iSeries AS/400 computing environment. EZDesigner/400 allows users to create electronic document templates - blank forms -- of their business forms, checks and labels, by positioning their various elements on-screen, through a click-and-drag PC WYSIWYG design process. Once designed, the templates then reside on the iSeries AS/400 computer. When a form, check or label is required, EZeDocs/400 or EZPayManager/400 merges the appropriate data from the company's financial/ERP system, with the respective template, and spools the combined file out to a laser printer, where the complete, finished document is generated using blank paper, blank security check stock or blank label stock.

Everley conferred with ACOM representatives and suddenly, EZeDocs/400 electronic documents made sense. "It was a technology I had been aware of, but I wasn't necessarily looking to convert," he says. Returning to the office, Everley asked his associate, Computer Operator Sonja Bartels to obtain more detailed pricing and to prepare a price-payback analysis.

"Normally, we look for a two and one-half year hard-dollar payback on cost saving projects," he says. "According to Sonja's projections, we were looking at a 1.1-year ROI. Armed with that analysis, we presented a proposal to purchase the solution, and received approval."

THE IMPLEMENTATION

National Crane purchased ACOM's e-forms software, including the graphical-user-interface-based forms design tool, in August and took delivery in September. When the software CD arrived, Everley and Bartels loaded it, launched it, and with Bartels assuming responsibility for implementing the forms, deployed the first application in October.

"The learning process went very quickly," says Bartels. "We started with the easiest form -- a simple, one-page statement -- and advanced from there."

Bartels used the company's existing forms as models, designing the new ones to look like their preprinted predecessors. Each form, she says, was treated as a separate project, and before she commenced, she met with the concerned department to explain the process and to solicit input. Some departments wanted minor changes, such as removing certain words or fields

that were no longer relevant, or suggesting ways to achieve a more professional look. With this input and the original form to guide her, Bartels would go to work.

The actual design process she describes is a simple one: First, with a copy of the form in-hand, she started the design software and imported a MAPICS-generated spool file from the iSeries (AS/400). Next, she began designing the form around actual data. She added boxes, lines, rounded corners, shading and other design elements utilizing the PC-based GUI interface. When everything was properly positioned, she simply saved the template to the EZeDocs/400 software residing on the AS/400 computer, with the software handling the conversion from PC to AS/400 format. Finally, she inserted logos and permanent company information directly into the template on the AS/400.

Notable among their new forms are the accounts receivable statement, invoices, purchase orders, order acknowledgements, pick lists and bills of lading. Some of these were a bit more complex, among them purchase orders, which required that certain disclosures such as terms and conditions be carried on the reverse side of the form. This was accomplished by adding a duplexing attachment to an existing printer thus enabling two-sided printing.

Altogether, six departments were affected by the conversion to electronic forms, and all of the company's operating forms are now generated on laser printers situated within the respective departments. EZeDocs/400 automatically merges the data streams to their designated printers, and as far as form production is concerned, the computer room is out of the picture.

SUCCESS!

National Crane has realized all its expectations and more since acquiring ACOM's e-forms software. "We were able to convert from an expensive and cumbersome, centralized forms printing process to a decentralized one that gives us crisp, professional, laser printed quality on plain paper stock," Everley says. "Because the system is so simple to use and so flexible we were able to accomplish our objectives quickly, and Sonja was even able to accommodate changes wanted by users during the design process. It is easy to change the templates even after they are in use."

The system's flexibility allowed Bartels significant creative range. The pick list, for example, formerly had alternating shaded color lines on the form for ease in reading across. Bartels was able to simulate these by designing boxes that are shaded with gray. She also created an order acknowledgement for internal use that is much easier to read -- they were previously printed as raw data

on plain paper -- and yet made it appear different enough from official acknowledgements that they won't be confused.

Some of the forms even include intelligent features, Everley says. "ACOM's e-forms software has a Conditional Command feature that enables you to insert unique conditions for generating specific copies," he says. "For example, on our customer order pick lists, the order number only appears on the first page of a multiple-page listing. (With EZeDocs/400) we were able to check the spot on each page where the order number appears and if it is found, draw a box around it for greater visibility. On subsequent pages where the order number is not present the box is not created."

The big payoff has been in clarity and timeliness. Normally, employees "...don't get real excited" about their forms, but an invoice clerk commented recently that now, she can always read the bills of lading, where previously she frequently experienced difficulty if the plant printer didn't get a new ribbon soon enough. And within the departments, the conversions have often sparked change. As they analyzed their form specifications, some managers also identified areas where their processes could be made more efficient.

There are still more forms to deal with, but Everley and Bartels are confident that they can handle it with ACOM's e-forms software. For example, shop packets are now printed on tractor-feed forms with alternating green lines, and converting these to laser printed forms is regarded as a near-term project.

Going forward, Everley and Bartels plan to move whatever they can to laser-printed output through EZeDocs/400, and they foresee no resistance. "It is now an easy sell," Everley says.

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iSeries 400 Division

3305 Breckinridge Blvd., Suite 130, Duluth, GA 30096

■ Tel: (800) 603-6768 or (770) 279-8955 ■ Fax: (770) 279-8288
■ eMail: info400@acom.com ■ Website: www.acom.com/iseries

