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Case Study: T.L. Ashford's iSeries Barcode Software

T.L. Ashford helps Canada mint its money.

by Thomas Stockwell
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If you offered T.L. Ashford a penny for its thoughts about barcode implementation, it could give you a whole mint. The Royal Canadian Mint, that is.

That's because in Ottawa and Winnipeg, Canada, the Royal Canadian Mint has found new and exciting ways to implement barcode software in nearly every aspect of its production, using T.L. Ashford's iSeries barcode software. In fact, the Mint's creative use of barcodes has enabled it to cut production costs and improve productivity while better controlling inventory and streamlining the capture of job labor statistics.

The Royal Canadian Mint Makes Money the New-Fashioned Way

The Royal Canadian Mint is a for-profit Crown corporation, headquartered in Ottawa, Canada, with production facilities in Winnipeg. It's one of the largest and most elaborate minting operations in the world, employing more than 500 highly skilled individuals who are involved in all aspects of coin design, production, and marketing. Not only does the Royal Canadian Mint produce all of Canada's circulation coins, but it has manufactured circulation coins for over 60 other nations throughout the world. The Mint also designs an impressive array of extremely valuable collector coins in gold, silver, and platinum bullion. It addition, it produces custom medals, tokens, and trade dollars, while offering gold refinery and assay services to customers around the globe. Such a highly valuable inventory created by such a highly skilled group of employees requires a special kind of care when tracking materials, work orders, and labor statistics.

It's not surprising, then, that when the Mint began studying barcode systems to place into the production process, it chose to directly incorporate its information systems design with the IBM iSeries. And the barcode printing software that it selected was from Kentucky-based T.L. Ashford.

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Anatomy of an Automated Minting Enterprise

The Royal Canadian Mint has a well-founded reputation for its modern, cost-effective business practices, and it has been using the well-established SSA BPCS ERP software on its iSeries platform to provide inventory control, work order scheduling, and financial accounting functions. However, as the requirements for accountability and efficiency have increased, so too have the requirements for up-to-the-minute operations information and control.

The Mint needed a means to rapidly and accurately capture operations data. This data needed to identify individual work orders and the associated materials as each design moved through its production processes. In addition, there was a need to more accurately track the labor hours and labor dollars to provide its cost accountants with the most realistic statistics. Why? When working in this highly skilled environment, even minor variances in inventory or labor can represent significant costs. So, if labor costs were more accurately identified, the Mint could use those figures to its competitive advantage when bidding on custom projects, while pinpointing opportunities to better streamline its entire operation.

Designing Barcode Excite-Mint

The Mint decided that it would implement a barcode data collection solution that would place machine-readable labels on all materials and inventory. This solution would also place barcodes on the actual work orders, on processing machinery, and on employee IDs. The concept was that, as materials moved through the highly customized production facilities, each piece of work, along with the processes and individual laborers associated with the work, would be scanned and recorded with a time-stamp. As individual items progressed through the highly automated production cycle, each step of the process would be accurately captured by the scanning devices.

This data would be transmitted, through a wireless network, directly into the iSeries DB2 databases, where the ongoing status of each work order and inventory item would be maintained.

By automating the data collection processes with barcodes, the Mint believed it could achieve real-time operations information, with the most accurate accounting of inventory and labor possible throughout the lifecycle of each work order.

Minting the System: The RCM Chooses T.L. Ashford Barcode Software

Any systems engineer will tell you that implementing a comprehensive data-collection scheme such as the Royal Canadian Mint was considering is no trivial matter. The logistics of such a project are immense, and determining software and hardware requirements is exacting.

The Royal Canadian Mint chose Toronto-based Nutech Systems as their project implementer and selected Intermec as the supplier of barcode printers, scanners, and wireless network.

For the iSeries barcode printing solution, the Mint selected T.L. Ashford. Why?

The advantages to using T.L. Ashford's solution were based upon the need to have data move directly from the iSeries to the printed labels, without the need for intermediary downloads through other servers or software. T.L. Ashford's solid reputation as the premiere AS/400 and iSeries barcode printing solution made it the natural choice for this implementation.

But why did they choose an iSeries-based software package for the printing of the barcode labels?

Gordon Hartley, Senior Systems Analyst at the Royal Canadian Mint, had these words of wisdom: "When you're thinking about barcode printing, the first thing you must consider is where the source of your data resides. In our case, it resides in the BPCS ERP database on the AS/400 [iSeries]. That's where all of our work orders and inventory records are kept, along with the master employee records and operation codes. By using the T.L. Ashford printing software, we could easily design the labels on the AS/400 [iSeries] and directly access this essential source data to print them out without adding the complexity of other translation software or server equipment."

T.L. Ashford Gold-Standard Support

"The T.L. Ashford solution works beautifully," Hartley continued. "We can easily design labels using the native green-screen terminals, or we can--as one of our programmers prefers--use T.L. Ashford's GUI program."

"Support from T.L. Ashford has been extremely good. It's been merely a phone call away. There have been no negatives about anything associated with their software. The documentation is quite complete and up-to-date, with special documentation for the Intermec printers that we used. T.L. Ashford provided all the drivers. And they have all the industry-standard barcodes built into the software itself."

A Successful Imple-Mint-tation

According to the Royal Canadian Mint, the ongoing implementation of barcodes into the production process and the time-and-attendance data collection process have been a tremendous success. The new data collection system, using barcodes, has provided the Mint with increased visibility into both labor recording and vital inventory control.

For instance, the new barcode data collection system provides the Mint with increased accuracy in costing its labor: Instead of "rounding up" labor charges to the nearest 15 minutes, the Mint now gets direct start-stop data associated with each minting process. Another important result was the better tracking of inventory by weekend shift workers, who were previously unable to write up the final inventory until their shifts ended on Sunday nights. Now, the Mint can see the location and the status of each work order and all the valuable associated materials online, in close to real-time.

According the Hartley, the first major phase of the implementation has gone exceptionally well, and the Mint is now analyzing phase-two requirements to identify specific areas where barcode data collection can better streamline the overall production process.

And the key to this overall success?

At the heart of this success has been the detailed understanding of the overall production processes, the requirements of the organization's unique environment, the technical analysis of how best to make use of IT resources and the iSeries platform.

According to Hartley, T.L. Ashford's contribution has been significant by providing excellent value in iSeries barcode software, up-to-date documentation, and superior customer support.

"I can heartily recommend T.L. Ashford's barcode software," Hartley says. "It runs beautifully."

For more information about the Royal Canadian Mint, visit www.mint.ca. For more information on T.L. Ashford's barcode software, visit www.tlashford.com.

Thomas M. Stockwell has written extensively about program development, project management, IT management, and IT consulting and has been a frequent contributor to many midrange periodicals. He has authored numerous white papers for iSeries solutions providers. His most recent consulting assignments have been as a Senior Industry Analyst working with IBM on the iSeries, on the mid-market, and specifically on WebSphere brand positioning.