



IBM Systems M A G A Z I N E

What's Old is New Again

DEMCO Inc. blends old- and new-school ways to improve its applications and systems **BY JIM UTSLER**

May-December arrangements. They're like something out of a tired romantic comedy. But in the IT world, they can be a great concern, with users accustomed to Web-type point-and-click interfaces having to deal with old-school green-screen tabbing, and developers schooled in visual development having to learn hard coding. That's hardly a laughing matter.

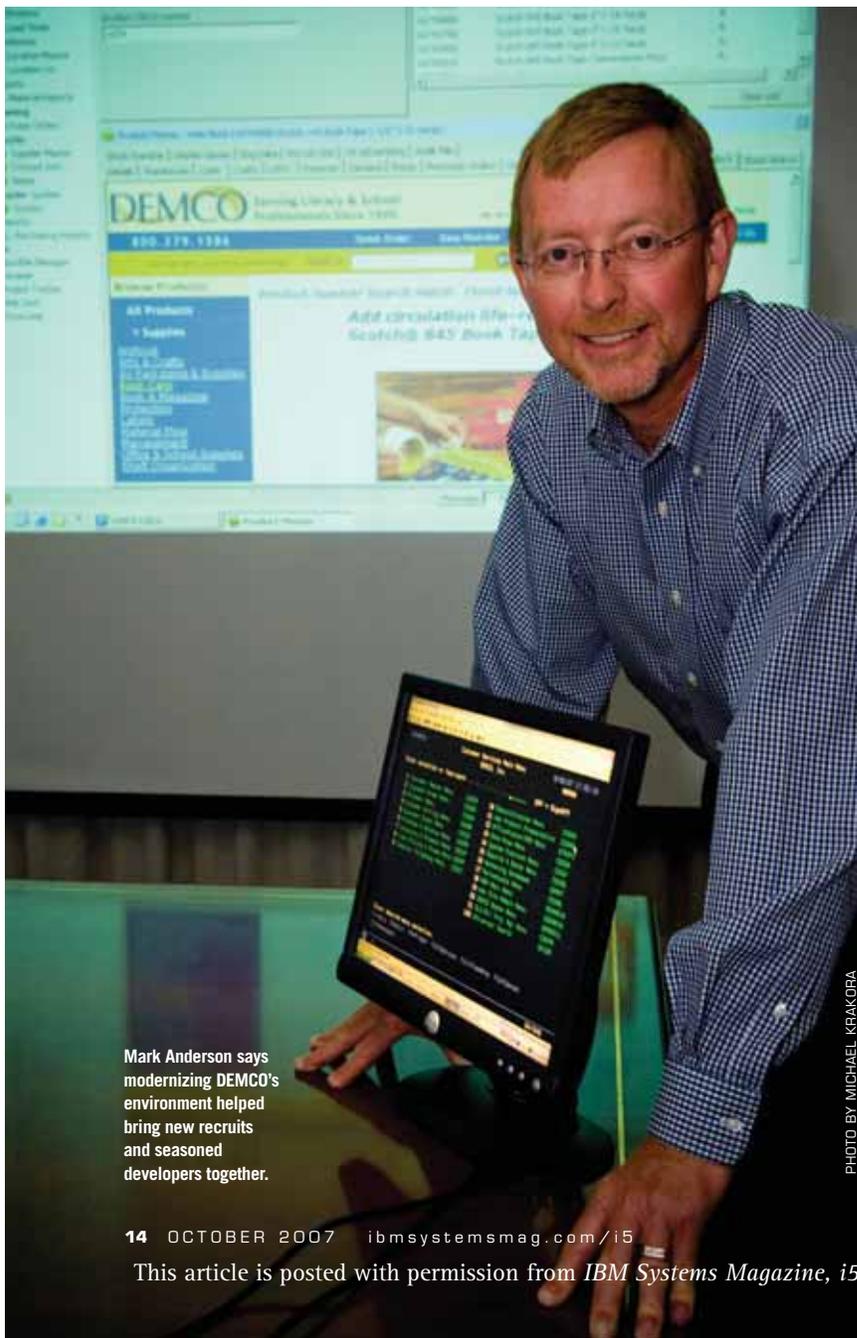
This isn't to say the old can't marry the new. For example, DEMCO Inc., the Madison, Wis.-based marketer, distributor and light manufacturer of library and school supplies, equipment, furniture and learning materials, is using a variety of tools to both modernize older applications and build new Web and rich-client applications from scratch. *IBM Systems Magazine, i5 Business Systems edition* asked Mark Anderson, DEMCO's vice president of business development and information services, to explain how old- and new-school developers can come together to benefit any organization.

Q: Could you tell me a little bit about your business?

A: DEMCO has been around a long time, since 1905. We've done different things over the years, but we've always served the library and school community. We have about 25,000 products that we offer our customers, including supplies, furniture, equipment and learning materials. A good portion of what we sell, we produce, so in addition to being a direct marketer and distributor, we're also a manufacturer.

Q: I understand DEMCO has a number of sister companies. Is that correct?

A: Yes. With a recent change to our legal structure, a number of business units that were subsidiaries of



Mark Anderson says modernizing DEMCO's environment helped bring new recruits and seasoned developers together.

PHOTO BY MICHAEL KRAKORA



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DEMCO became sister companies of DEMCO. DEMCO is still the largest within the family of companies in terms of sales and co-workers. We have sister companies that operate under different brand names located in New York and North Carolina, as well as a number of brands operating out of the United Kingdom.

Q: Are all of these sister companies operating on the same computing platform?

A: No, we aren’t. There are a lot of unique things about the DEMCO culture, and one of them is maintaining a high degree of autonomy and independence between the various operating companies. So the acquired companies tend to either continue to operate on the enterprise systems they had in place when acquired or make independent decisions. At present, we have DEMCO and another smaller company running within a computing environment that includes an IBM* iSeries* 810 and an 825, as well as two AS/400* 170s. DEMCO Europe runs within a subset of that system because we host their e-commerce sites.

Q: Is that on the 810 or 825?

A: Both. The 810 is basically a front-end HTTP server. Our e-commerce Web application, written in LANSAs for the Web, runs on the 825. It’s an N-tier configuration, with one of the tiers out on the 810 and the application layer and the data layer on the 825. That’s our production machine, and it supports our multiple e-commerce sites.

Q: What do you do with the two 170s?

A: One is our development environment and the other acts as our data warehouse. We’re a direct marketer, but we operate in the business-to-business arena. So you might say, “Hmm, that’s kind of a limited server for a data warehouse.” But it serves us well because we’re dealing with a finite number of customers when compared to business-to-consumer direct marketers. We aren’t counting customers in the millions.

Q: Can you tell me about your in-house ERP solution?

A: When I came to DEMCO in 1989, the company was operating in a mainframe kind of world. We had five COBOL developers at the time. There was a Honeywell system that was very similar to the IBM 4341 class of machine. However, that

Honeywell system was clearly in decline as a computing environment, and the writing was on the wall that we needed to make a transformation. We had an opportunity to begin again with a clean slate. We put together a strategy that included adding third-party foundation pieces to our enterprise system that addressed operations and financials. Then we planned to custom develop those things that were more strategically important and tuned to our business, which included customer services and the data warehousing. We ended up selecting a package from a vendor out of Chicago for the foundation. We then went through a side-by-side comparison of several CASE tools for our new development environment. As a result of going through that exercise, we selected the LANSAs development environment. Because the ERP application ran on the IBM AS/400 platform, we adopted that environment. That was really a healthy process, because it led us to the LANSAs and IBM technologies and they’re both working well for us today.

Q: So, was it a good decision to adopt LANSAs and the System i platform?

A: We believe so. It wasn’t like we were geniuses. It was the process that led us to those decisions. We started on that course, and we were very successful at transitioning our development staff into the new environment. We implemented the package and developed our skills to write applications in the LANSAs environment and have been doing so ever since.

As the last six or seven years have gone by, we have acquired additional LANSAs development tools. The first one was in 1999 when we recognized the need for a dramatic improvement to our e-commerce applications. But to be honest, I was reluctant to go with LANSAs for the Web because it was such an easy decision for us to make. I felt it was too much the path of least resistance. So we worked hard with outside firms to put together a very detailed design as to what we wanted to do and then we went looking for who could help us. That whole process led us back to LANSAs for the Web.

Also during that time, we looked at a number of application-modernization tools. After we got through the first blush of enthusiasm at how neat the screen-scraped interface looked, we came to the realization that there really wasn’t much benefit to that type of refactoring. Everything looked a little



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different, but it still worked exactly the same. You still navigated through the same 200 different menu screens to get where you wanted to go. It just wasn't worth the expense and effort so we never pulled the trigger on that approach.

We then went to COMMON in the spring of 2006 and saw LANSA's RAMP solution. Following that, we started a pilot project that was more extensive than the things we had done in the past. The effort was aimed at understanding what the issues were going to be when we tackled the real modernization project from an implementation and development standpoint and also to understand what kind of resources were going to be required and what kind of a result we were going to get from the whole thing. We spent the rest of 2006 on that, still coding 5250-character-based applications, but using that new modernization tool.

In September 2006, we went through the RAMP training and launched the pilot project. We took half the development group and had them focus on product-related screens and information, and the other half focused on customer-related screens. We were very pleased with the results, with positive benefits in the compression of navigation. We were also able to weave both rich-client and some browser-based applications very seamlessly in the framework.

Now, in 2007, we're actively embarking on the big-bang modernization project. Our game plan is to, by the end of this year, have the critical mass of the enterprise system modernized and then start marching around the organization deploying and introducing the different functional areas to the application. When we've done that, we'll essentially stop using the character-based version of the application. At that point, the way is clear for us to really commit to Visual LANSA development for our core business system as opposed to 5250 development.

Q: Is that so you can go directly to developing modernized applications?

A: Exactly. For us, RAMP was—and I think still is—the best way to take a big application, get it modernized and set the stage for transition into the years to come, preserving what you've got and setting the stage for where you want to operate going forward. Building new applications with the existing base already modernized is very beneficial.

Q: Will all this modernizing of your applications mean you'll also consolidate to a new System i platform?

A: Yep, that's happening now. We'll be going to a model 520 with a production LPAR, a Web services LPAR, a development LPAR and a data warehouse LPAR.

Q: All on one box?

A: All on one box, though as we look at our disaster-recovery (DR) journey, there's a very good chance we're going to put another box in a secondary datacenter in 2008. What we'll likely do, just to make sure the computing lights come on in the event of a disaster, is put our development environment on an actively used LPAR in that disaster-recovery box. For data recovery, we'll start out with a tape-based backup methodology, but eventually move to a real-time data replication solution in order to fully achieve our DR desires.

Q: Voice over IP (VoIP) has become a big thing these days. Is that something you're looking into deploying?

A: Absolutely. We've been looking at it for some time. We have a big traditional PBX [private branch exchange] in our building, and it's been woven into our business systems. With all that infrastructure in place, we just couldn't see the business case for transitioning to voice over IP. However, when we looked at the phone situation from a DR perspective, VoIP started to make more sense. We're now implementing a VoIP phone system in our workspace-recovery location. Our chairman uses the analogy of a camel sticking its nose under the flap of your tent. Pretty soon you've got the whole camel in there. Similarly, I think that our little voyage into voice over IP might start the transition to a complete commitment down the road.

Q: It sounds like some of your big issues are application modernization and disaster recovery. What other challenges are you facing as you look forward?

A: Well, I think, technical staffing is an issue. We have great retention and very low turnover in our development group, but we're all getting older every day. We have good conversations within our IT department, and everyone expresses anxiety, because they feel very responsible to fulfill their promise to the organization and it takes a mastery of different skill sets to be able to do that, especially as the pace of technological change

increases. The graying of the veterans and the gulf that might exist between the technology we currently use versus that expected by new developers who are coming on the scene can be a real challenge.

Q: I would imagine as younger people come into the field, they've been schooled in newer technologies, such as Linux* and open source. Does that have an impact?

A: Yeah, they aren't really all that interested in those prickly old-school things that you have to use day in and day out. That's why I think modernization is so important, so that it's an appealing technological environment.

Q: As your co-workers in the IT department retire, you're bringing in younger staff. Are they even aware of the System i platform?

A: Of the last three people we brought into the application development area, only one was familiar with the System i platform. The two others were not, so we're making the introductions. They were .NET-type developers, and they've adapted well to this modernized environment we are heading toward. They speak very favorably to the structure and efficiency that the LANSAs development environment provides as opposed to a more a la carte environment that you get in the .NET, Visual Basic world. But there's still a gulf between people who understand the System i operating environment versus those who are comfortable in the Intel* environment. We feel we can be successful in helping technical people through the transition, but it does require an investment of time and attention. **i**



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