

Thinking Inside the Box

BY RON ROSZKIEWICZ

Thinking outside the box by piecing together generic technology components to create a streamlined workflow is a dangerous proposition. It's risky in the hands of professionals and even more so in the hands of do-it-yourselfers. Risky because success is not assured and the project is as likely as not to end up shelved and expensive because building a workflow from pricey components takes staff time and research. Since in the end it's all about return on investment (ROI) and total cost of ownership (TCO), it makes sense that thinking inside the box by turning to a well-made, integrated software package might be the best choice for streamlining all or parts of a graphic arts or prepress workflow.

In years past, prepackaged systems for prepress were maligned (or at least suspect) because they were closed to interoperability or locked the user into high support fees and overdependence on one company's product development and upgrade schedule.

On the graphic arts side, there have been woefully few packaged solutions available.

Adobe Systems Inc. has perhaps been the leader in attempting to define workflow protocols to link and automate disparate graphic arts applications. Extreme (www.adobe.com/products/extreme/main.html) is an approach that is still supported by Adobe. It is dependent on support by vendors, however, many of them competitors, and is also reliant on a PostScript Level 3 RIP.

Adobe's predicament is similar to that faced by CIP4/JDF and PDF/X standards, ultimately depending on OEM vendors to create products that support it. It's no wonder the response by most prepress and graphic arts companies has been to adopt small, homegrown

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solutions and build hybrid workflows. Nor is it surprising that the most popular digital asset databases in use today are the ones that come with the Macintosh or Windows operating systems and file folders. If not for the Web and the exponential growth in digital assets, many of these companies would be content dragging and copying files and following simple naming conventions.

Things have obviously changed in the past decade,

and many companies previously burned by choosing wrong are returning to have a look at the new merchandise. Many of them are discovering that there are few complete solutions. Mostly they are finding digital workflow kits where everything is included except for the paint, glue, clamps, etc.

Luckily a lot has changed over the past decade, thanks to the evolution of the Internet and database interoperability. True "closed" systems with proprietary formats built to optimize a particular hardware configuration are rare, and interoperability with other systems is generally possible, thanks to open standards. This means that the justification for adoption can rest on a straightforward business case rather than an open-ended timeline and incomplete technology.

One area that has not changed markedly is the over-reliance on "content" creation over "product" creation in most solutions. Most applications and asset management systems focus on work in progress. Data is controlled, assets checked in and out, histories and versions of assets tracked and reported on. Products such as Adobe's Creative Suite provide Version Cue for collaboration, but it, too, remains focused on work in progress. What is lacking is for content to be tracked by their relationships to the product they will become part of. In this regard, digital asset management systems make poor workflow control systems.

Viewing assets in the context of a project or as components of projects has benefits at every stage of the content's life cycle. Scanned images or digital photographs destined for a magazine story can be grouped under a project identifier, along with any characterization or production metadata tagged onto it right from the point of acquisition. This is the way it should be. Digital asset librarians, archivists and photo editors

should be the gatekeepers for cataloging these assets and assigning metadata to them, and they should be able to do it from the start.

Down the line, as new photos, illustrations or text elements are added to the project, all of this key information can be inherited by the new assets. Since all of a project's assets would be linked, when it comes time to archive, we would have a choice of backing up a simple PDF of the final product or all of the elements that make up the product. Both methods have their advantages, depending on whether or not the product will be re-used.

Automation is another workflow goal, although automating every process in a workflow is still a dream. It's clear that standardizing on JDF instructions, PDF/X controlled output formats, XML and metadata sets the stage for a number of prepress, press and post-press operations to be automated. It's also possible to build on top of these technologies and automate some of the repeatable processes that go into specifying and ordering print products.

iWay, from Press-Sense, has taken a comprehensive step in automating the entire transaction process for printers. The amount of sophisticated built-in functionality is surprising. Although I risk starting a proverbial flame war over required features, it's quite possible that if the function is not included in iWay, you probably don't need it.

Recently, I had the chance to review Press-Sense's iWay and Metacomunications' Virtual Job Ticket workflow applications. Both products provide a workflow solution to different problems. iWay brings e-commerce automation to purchasing print products, and Virtual Ticket brings project management to graphic arts production. Both grew out of real world solutions to real world problems and have been stress-tested in production environments.

Virtual Ticket and iWay can be used right out of the box and provide true plug and play without making compromises or creating new choke points in the workflow. Both of these packages conform to the packaged solution approach I alluded to earlier and focus on the end product or project as the objective rather than the individual

file and artist. Focusing on the end product will become more critical as workflows become more centralized as part of controlled asset management, pre-flighting before prepress, JDF definition assignments, generation of approved and locked PDF/X files for output, and searchable archives. This approach does not dismiss collaboration during content creation or any of the other subworkflows that take place within a design group. These subworkflows are (or should be) considered branches of the main workflow path.

The following are examples of packaged solutions that meet the following criteria:

- Ready to use out of the box (with training and setup support, but not extensive customization).
- Conform to appropriate standards for the industry it is serving (such as JDF).
- Interoperable with outside systems where appropriate (SQL).
- Clearly defined and competitive ROI.

The alternative to adopting a packaged system is building one from component parts or renting one through an application service provider (ASP). Building it yourself is risky and expensive, and is the approach least likely to be taken by medium-size companies. The rented solution provides packaged functionality at incremental cost. But for companies that have the volume to support a local solution, renting merely defers the inevitable requirement to commit and buy.

iWay Prime from Press-sense

iWay is a comprehensive print-transaction and man-

iWay Job Tracking and Search



iWay Printing and Production Queues with details

agement tool. With this product, Press-sence (www.press-sence.com) has created an application suite that streamlines the ordering of day-to-day items such as forms, business cards, point-of-purchase displays and real estate flyers, with the only customization being the input of parameters that are unique to the company installing it.

To pull this off and eliminate any requirement on the part of the buyer to extend functionality through third-party additions, Press-sence has added just enough functionality in each functional area to make it work, including an e-commerce shopping cart, PDF-based imposition, data repository for job elements and templates, flexible job quotation system, variable printing controls, and output drivers to print on demand devices such as NexPress and HP Indigo sys-

iWay Production and Delivery Tracking



tems. It's not just intended for these devices, however. The system can be used just as well for sheet or offset printing by customers that require less hand holding through prepress.

What attracted me to this system was how well-covered the functionality was. The software reduces dependence on many of the traditional customer service and account executive functions, but does not eliminate them. Once the account is set up, templates defined (based in most cases on existing artwork) and pricing per customer determined, print orders can be handled automatically right up to releasing for press.

The user interface is a Web browser, and users determine the skin, or HTML interface, the customer or the customer's customer sees. Since everything is frame-based, it's easy to redesign the pages and add custom logos, contact information and navigation menus. The system is built around the use of templates. A library of templates can reside on the printer's site or can be uploaded just in time for a particular job.

Text and image elements on these templates can at any time be defined as variable. This doesn't have to be the case, but for repeatedly printing items, such as business cards by the human resources department, it's the only way. Pricing is also dealt with in a realistic, automated manner. On the printer side, discounts for quantity, special customers or premiums for rush jobs are plugged in and jobs are automatically calculated in real time.

Of course, no automated system will work if there is a problem with fonts, images or other typical prepress gremlins. With iWay, preflighting is built in and both the customer and the customer service personnel are alerted to any problems.

When variable printing is desired, the fields that will change can be identified and linked to an outside database or a listing built explicitly for the job at hand. In all cases, screen previews show the status of the job and provide visual clues to any problems missed in preflight.

Once a job makes it into the output queue, it awaits final approval by the production man-

ager before being routed to a local output device or forwarded on to a remote printer.

iWay's rational implementation of each of the components is impressive. For example, the underlying database is not an enterprise-level DAM system, but an SQL database capable of handling templates and artwork for the jobs moving through. If you need more than that, you can link up a separate repository. Since customers will, for the most part, manage their own data before uploading it for output, such storage will not be a necessary value-added piece for the purpose of the automated output system. But it is available as a value-added service should the need arise.

So what's missing? What will get in the way of using this system after a week or two of configuration? Not much.

Obviously, it will be necessary to set up an online merchant account for processing credit cards, which is not a big deal for companies that already process credit cards offline. Hosting must be dealt with, which will mean setting up the system in-house or offsite. Other than that, there's administration as needed to get customers and their contact information into the system and input pricing structures for them.

It will also be necessary to input output devices not already supplied with the system into the device fingerprint information. Since this information is used by the processing software to challenge jobs for size and format, correct information is critical. Other than that, determining whether you have enough work that can be automated to satisfy a reasonable ROI is a business decision. Cost of ownership seems reasonable (see box

iWay Prime

The iWay Prime system is typically sold installed on a Xeon dual processor machine for around \$35,000-\$45,000, including training. Yearly support and upgrade cost is around \$2,700.

The iWay system is currently distributed throughout the U.S. by:

Cohesion. Inc.
270 Littleton Road
Westford, Mass., 01886
Phone: 978-692-1177
Fax: 978-692-8877



below), and most of the chores can be added onto the ones carried out by the person currently overseeing the Web site and network.

iWay is a packaged system, but it is not a closed one. It allows for SQL interconnectivity, so linking sales data with accounting is possible. It accepts popular file formats, such as QuarkXPress, PDF and JPEG. Metadata can be input to define the job both arbitrar-

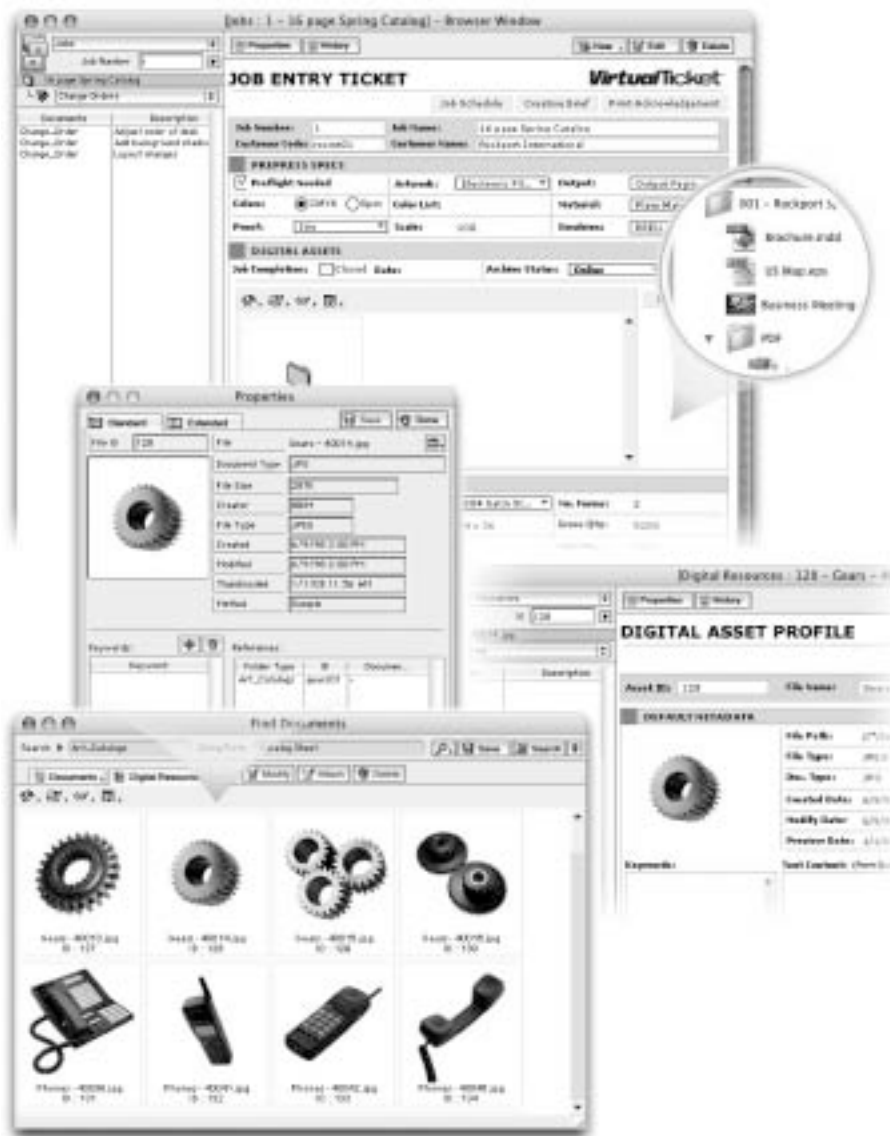
Virtual Ticket Job Schedule form and search panels

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ily or as job definition format (JDF) data. Imported customer lists can be brought in as tab delimited files. iWay also conforms to PPML commonly used by variable printers.

Virtual Job Ticket from Metacomunications

The next packaged solution to consider is a job project management solution. Today, many desktop applications are geared to work-in-progress content creation and don't go beyond supporting users developing content independently. Many digital asset management systems encourage this democratic view of project workflow, taking the perspective that the movement of the data can be tracked and retrieved wherever it is



Virtual Ticket Job form and asset repository views

needed by metadata. Another point of view is that the most important objective in the workflow is the end product, which can be a brochure, book, magazine or business card.

In an analog sense, this approach is the equivalent of a manila routing folder with a job ticket and all the bits of artwork stuffed inside. The folder in this case is the project manager software. The analog system is not a particularly safe system. Things can get lost or damaged, and digital elements have to be shunted around on a hard copy such as a CD or DVD.

The digital job jacket goes beyond homegrown approaches to the same problem. Metacomunications (www.meta-comm.com) developed Virtual Job Ticket to digitize and streamline this process. It nearly bends over backward to help anyone accustomed to the manila folder approach make an easy transition, including the use of scanned-in analog job tickets as the basis for the virtual version. The system expects that as a new job is accepted and inspected, a job ticket is set up with as much or as little metadata about the cus-

tomers, job format, JDF prepress and print information, and any other relevant keywords as are known. When new text or images are downloaded into the workgroup central system and linked to the job ticket, all of the metadata will be inherited by the new elements; no additional input is needed. Any and all changes made to the elements are tracked and reported on, and the metadata can always be edited.

As with iWay, Virtual Job Ticket has an underlying database for asset storage. It is not a standalone DAM system intended for widespread enterprise syndication, but it does have some nice features that will satisfy workgroup users. For example, all element attributes of a compound layout — say, a QuarkXPress document — are defined as metadata, together with fonts used, geometry of page elements and color model. In addition, all text is extracted for the purpose of full-text searching. This is all done in an effort to make a system that adapts to the ways that creative staff prefer to work. Of course, thumbnails are displayed as previews along with the records of the assets in the virtual tickets.

Organizing assets in this way during work in progress discourages the dissemination of assets into data webs and provides a high-level view of each project at any point in time. It also constitutes a preferred approach to archiving, since backing up an “environment” of all of the relevant components of any particular job, along with its metadata, makes re-creating the job a lot easier, although perhaps not as streamlined as archiving a single PDF.

Another objective of Virtual Ticket is project management in its more generic form. This means that production information, costing, customer history and reporting are all important and integrated parts of the

Virtual Ticket

Job Manager and its companion application Virtual Ticket are priced based on the number of concurrent users. An entry-level system with five concurrent users costs about \$4,500, and a 20 concurrent-user system is approximately \$18,000.

Virtual Ticket is available from:

Metacomunications Inc.
www.meta-comm.com
 1210 S. Gilbert St.,
 Iowa City, Iowa 52240
 Phone: 319-337-8599
 Fax: 800-771-6382

system. Companywide integration can be achieved by using SQL or XML to link to external systems.

As with any packaged system, it is easy to criticize components against more full-featured competition. But that would be missing the point and the goal of the product in its target market. Customization is possible where it makes sense. The user determines the design of forms for data input, custom metadata and type of reports.

Our Take

Many companies adopting a digital asset management system are faced with the prospect of imposing a DAM workflow solution on their company when it should be the other way around. Production goals, customer management and job tracking are at least as important as content creation and data access. The goal should be project control for the production of an end product, and the only way to accomplish this is through a workflow based on a project. Virtual Ticket's prepackaged set of functionality seems to provide this management layer on top of a very capable data repository and a full set of database reporting options.

Both of the products reviewed in this article are

modestly priced when you compare them with the cost of purchasing and gluing together a hybrid solution of components. Both allow a company to be up and running in a short period of time with a minimum of disruption.

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Optional components can extend the core products discussed here, but unlike most systems, the core iWay and Virtual Ticket products do not require a long list of optional extras before they can achieve the functionality they promise. **TSR**

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