JDF for the Rest of Us
The 411 for Folks that Live with Deadlines and Budgets
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When print professionals hear terms like "JDF" or "CIM" the first thing that may come to mind is a vendor's advertisement, a product presentation at a big tradeshow like Print, or an article in a trade magazine that attempted to explain what these terms mean. For many it's very ethereal — it's an industry thing — something that they'll get around to … one day.

In addition to some hearsay about the technology not being ready for primetime, print professionals want to know where they should begin; where's the biggest bang for the buck, what product should I look at? Unfortunately, the answer is "it depends," and that isn't necessarily very helpful. Although you can sketch a "typical workflow" at the highest level of abstraction, in real life, just about every printer, prepress service or publisher has a different workflow, combination of equipment, customer mix, and so forth; so of course, "it depends."

Although many of the advertised benefits of the Job Definition Format (JDF) and process automation seem to require big, cumbersome, enterprise-wide programs, in truth you're best off starting with a specific area where you think a little automation will give you that edge you are looking for.

Take for instance Lavigne Inc of Worcester, Massachusetts. They operated a "print on demand" business that was basically a website that emailed job tickets. It was nothing more than an electronic means of job submission and the internal workflow was very much similar to how they handled conventional print jobs. Lavigne used JDF to connect Printable's PrintOne Customer Center to the Hewlett-Packard Indigo ProductionFlow digital front-end to automate their process. Since implementation, they have gone from 25 orders processed per month to over 700 orders per month while maintaining a 92% reduction in customer processing costs. Hmmm … not bad for a very simple implementation.

How did they do it? LaVigne requested a joint meeting between HP and Printable to see if JDF could be used to tie the two systems together and implement Lavigne's workflow design. They identified the appropriate tags within the JDF specification that made the most sense, created workflow templates for the different types of jobs to be produced, created invoicing and reporting templates that utilized the JDF tickets, created the folders in the digital asset database, tested with a 'dummy' portal and went live with a single piece for an existing customer. The entire implementation took three months. So it wasn't an "out of the box solution" and it did take some work; but hardly the rocket science that some folks make process automation out to be.

You might say to yourself, "That's nice, but they could have done that without JDF," and you'd be right. You can probably get any *two* vendors together to work out integration issues with or without a standard. But the problem becomes more difficult as the number of vendors you add to the mix increases, particularly when you start crossing departments.

Take Williamson Printing of Dallas, TX for instance. Williamson was looking for ways to make their bottom-line more attractive — aren't we all! They identified two areas where manual operations added time to production: imposition and cutter set-up. There's a leap … from prepress to postpress … what do these operations have in common? In imposition, Williamson was taking 15-30 minutes per job to manually make impositions, plus customer service representatives were often waiting 15 minutes just to take their turn at the imposition workstation. In the bindery, it was taking 25 to 30 minutes to setup cutters for each job.

Williamson had been using the Esko-Graphics Scope workflow system in prepress and recently acquired a PRISM MIS system. They also selected Creo's (now Kodak Graphic Communications Group) UpFront Version 3.1, which customer service representatives use to enter job data. A JDF file is created in UpFront and exported to the Esko-Graphics Scope workflow system, which uses that data to automatically generate an imposition layout. The pages are entered into the page list of the imposition in prepress, as that information is typically not available at the moment of the calculation of the imposition in Upfront. Whereas imposition previously took three steps (which would have to be repeated every time there was a change in the job), now the CSRs no longer create impositions by hand and prepress operators no longer have to reenter information manually in Scope.

Eighty five percent (85%) of Williamson's jobs now run through the new workflow and the results are pretty impressive. The prepress operator time to recreate an imposition has been reduced by 95% per job, the number of errors in prepress has been reduced by 100% (in other words, zero errors), and job latency has been reduced by one hour — jobs are no longer waiting hours before the imposition gets done; it is instantaneous. If that isn't enough, Williamson had cutters that were already capable of automated setup via JDF and now imposition data is also sent to the finishing machines to automate setup. There is also JMF messaging between the PRISM MIS and prepress, as well as between UpFront and the postpress devices – which ultimately connects back to PRISM as well. With this connectivity, Williamson gets an instant, accurate status of any device it chooses to look at.

Williamson plans on next automating softproof generation via JDF and one day they hope to automate the entire company, from accounting software to press to shipping (and receiving). Without JDF, such ambitions would only be pipe dreams for all but the largest printing houses; even then the complexity of proprietary integration would drive even the brightest IT manager mad!

There's no need to skip over the pressroom either; in fact, the connection between prepress and the pressroom one of the most common places to start for printers. Automating ink key pre-settings using the older CIP3 Printing Production Format (PPF) or JDF is low-hanging fruit — if you haven't done so yet, what are you waiting for? (Note: PPF is mapped to JDF and JDF can perform all of the functions of PPF, so systems that use PPF can be fully integrated into a JDF environment.) But there's more to automating the pressroom than just ink key pre-setting.

Take Kraft Druck und Verlag GmbH, a German printer, for instance. They upgraded their Hiflex MIS software so that they could provide customers with historic information on closed jobs using any standard Internet browser. In 2003 Kraft Druck und Verlag also upgraded or replaced several systems: [*Yes, I said 2003!*]

- In prepress, the Creo Prinergy PDF Workflow replaced Kraft Druck und Verlag's older Brisque workflow system.

- Kraft Druck replaced an older Lotum 800V with a fully-automatic Lotum 800 Quantum thermal platesetter for digital platemaking.

- The company's three MAN Roland 700 sheet-fed offset presses were updated with the PECOM system.

"These upgrades were not coincidental," said Kraft Druck and Verlag General Manager Werner Kraft, "We were searching for seamless, cross-vendor communication between the Hiflex MIS and the production systems in the prepress and the press department. Our aim was to improve customer services by organizing operations more efficiently and making the production process more transparent and flexible."

The resulting implementation used JDF (Job Definition Format) and JMF (Job Messaging Format) to create the interconnection between the Hiflex MIS and the Creo Prinergy Workflow System, as well as between the Hiflex MIS and the PECOM System of the MAN Roland sheet-fed offset presses. Hiflex uses the JDF interface to create customer details and printing instructions and data only needs to be entered once. The system automatically generates the complete production sequence, and the job information is ready to be passed on to the subsequent Creo and MAN Roland systems.

The direct effect of the JDF connectivity project was an increase in productive hours (print run hours) in the first period of +9.6% (2004 compared to 2003). In prepress alone, Kraft Druck und Verlag estimates that it saves 24 minutes per day in job creation. Their ROI is 446.5% within five years (which means that the investment is paid back 5.46 times).

So when the boss asks you to sharpen your pencil and get that 2006 budget in order, consider how you can automate processes that are labor intensive, involve re-keying data or are highly repetitive. Know that by specifying only JDF-enabled new equipment and upgrades, you can buy with confidence that new equipment will work with future automation projects and a quick ROI will add some greenbacks to that net profit line, and perhaps add a few dollars to the year-end bonus pool.

Detailed case studies are now available on the CIP4 website (www.cip4.org, see the CIPPI awards and the document archive), from your vendors, and from groups such as NGP (http://www.ngppartners.org). Also, download the *JDF Marketplace*, (free of charge), from www.cip4.org for a listing of JDF-enabled products and services that are available today.