

Saying YES to JDF!

Williamson takes workflow automation to the next level



Joe Novak doesn't have an easy job. He's the director of technology for Williamson Printing Corp. (Dallas), one of the largest printers in the United States. "We're a different breed of printer," says Novak. "We do so many different things."

Williamson, a perennial fixture at the Premier Print Awards, won 121 total awards in the 2005 competition for products and services ranging from direct mail to annual reports, product brochures, calendars and posters.

The company's equipment list is equally diverse. Although Williamson has an impressive array of Heidelberg sheetfed presses and finishing equipment, it also has four web presses (two MAN Roland Rotomans and two Heidelberg Harris models), an Esko Scope workflow driving Kodak platesetters, Metrix job planning software and Prism's WIN management information system (MIS) keeping track of it all.

Williamson also faces the same challenge confronting every printer in an overcrowded market. "You can't raise prices," says Novak. "Using automation and technology is the only way to make money."

They like it. They love it...

Jerry (left) and Jesse (right) Williamson joined Heidelberg CEO Bernhard Schreier (center) to inspect their Speedmaster SM 102 twelve-color press with coating unit. (Photo courtesy of Heidelberg)

It's not just for Williamson

Williamson Printing Co. (Dallas) is a Texas-sized printer specializing in work for advertising agencies, design studios, and a wide range of local, regional, national and international businesses. The 400-employee, \$75 million printer also has several sister companies offering project management, digital printing, fulfillment and mailing, marketing, and legal and financial document printing.

Williamson's pressroom also is unique. In addition to two MAN Roland Rotoman web presses, the company is a Heidelberg sheetfed showplace. The latest additions include an eight-color Speedmaster XL 105 with coating unit; two Speedmaster SM 102 12-color presses with coating units; and a Speedmaster CD 102 10-color machine with three coating units, three drying units and an extended delivery.

These presses were part of scheduled upgrade—their installation wasn't triggered by the automation initiative. Joe Novak as well as his workflow partners stress that JDF integration is for printers of all sizes.

"You don't have to be a rocket scientist," says Novak. "You just have to plan and know where to start."

Novak says MIS is the key workflow ingredient, and Esko's workflow product manager, Freddy Pieters, concurs: "You have to have software on the MIS side capable of producing rich enough JDF files and software on the prepress side to consume that. That's where it all starts."

Noting that "job definition" is part of the JDF acronym, Pieters says there's no substitute for good working practices. Users must start with accurate information—if a prepress department's paper worksheet is pockmarked with pencil scrawls, Post-it Notes and Liquid Paper, JDF isn't likely to help. MIS programs can ensure that jobs are defined correctly in terms of quantity, color, paper size and so on.

While homegrown MIS setups might provide adequate accounting functions, Pieters says commercial products are better suited to a JDF implementation. "JDF is not just a bit of XML—there's also HTTP interfacing so that two pieces of software can talk to each other bidirectionally. It's much easier to rely on a commercial product with a serious engineering team behind it."

LithoTechnics' Lisa Alterio adds that JDF is not an all-or-nothing proposition. "You can implement it in parts of your workflow," she says. "Estimating, planning and imposition don't require capital equipment. So [the average] printer could start there."

Printers mulling over their MIS options still can reap JDF's benefits. "Even if you only had Acrobat 7, that is capable of making a JDF," Alterio says. "That JDF can be imported into Metrix, which in turn can export a JDF that goes to any of the high-end prepress systems. If and when the printer gets JDF-enabled cutters, folders and so on, they're all set. They can just export [the information] from Metrix."

In early 2002, Novak launched Williamson's quest to eliminate the pockets of manual interventions that were impeding overall process efficiency. Four years ago, a flurry of papers signaled the start of most jobs. When orders came in, production managers got busy with pencils and paper to create imposed layout plans, which frequently were misplaced or misinterpreted by other employees. To determine a project's status, the production managers typically had to grab their pencils and paper and hunt down the job in the plant.

This past June, with the help of Esko, LithoTechnics, Prism and Heidelberg, Williamson achieved its goal. Automatic imposition capabilities have eliminated paper layouts as well as time spent re-entering this information in the prepress department. And employees across all departments can access current job information instantly. Pencil, paper and the old-fashioned scheduling board have given way to a huge plasma display, a veritable JDF Jumbotron.

"We have a real JDF workflow," says Novak. "We can estimate properly and we know our exact costs. We know the ROI is there."

Making the most of MIS

Novak's 2002 visit to Esko in Belgium got the ball rolling. "When we first started working with JDF, we were looking for meaningful things we could do for the end user," Pieters explains. "Because an MIS has so much imposition information, it made sense to automate that step and send the data to prepress [rather than have a prepress operator rekey information]."

Esko found that while most MIS programs had the necessary information to describe an imposition in great detail, the JDF 1.0 spec didn't

A man with a plan

LithoTechnics founder Rohan Holt has a lot of experience with job planning software.

In the late 1990s, he created "SuperImpose," the product that eventually evolved into UpFront. Holt sold his company to ScenicSoft (which was acquired by Creo, which itself is now part of Kodak), but he continued his quest for an easy-to-use, automated layout program.

Introduced several years ago, Holt's Metrix is a software program that "takes in a description of page geometry and plans a job in the most efficient manner, taking into consideration manufacturing capabilities on the shop floor," says Brian Alterio of LithoTechnics North American distributor, Alterio Associates.

Metrix initially was restricted to calculating the best way to gang jobs on a single press sheet, but subsequent versions expanded its reach to more complex bound and folded work. The software can export three types of data: Preps templates for use in Preps or almost any popular imposition program; PDF and JDF for high-end workflow systems that can handle JDF; and imposed PDF for smaller users that might lack a JDF-enabled prepress system.

Metrix is based on JDF, a key factor in its success, according to Lisa Alterio, partner at Alterio Associates. "If there were no JDF, there would be no Metrix," she says. "We're a small company—to get data from the big boys and play an important role in the workflow is only possible because of JDF. That was a key reason Joe Novak became interested—he saw we were doing things with JDF that other people weren't."

See www.lithotechnics.com.



The brothers Williamson

Williamson Printing Corp. (Dallas) traces its roots to the Dorsey Co., a printing company and office supply store founded in 1884. James Dorsey handled sales while his brother Henry ran the print shop. Today, brothers Jerry and Jesse Williamson are in charge.

Jerry (CEO) and Jesse (COO) have won countless accolades for their industry leadership and technical innovations. Jerry received both his undergraduate and law degrees from Southern Methodist University and served as an assistant city attorney for the city of Dallas prior to joining the family business in 1968. Since the 1970s, Jerry has served in various capacities with Printing Industries of Texas and Printing Industries of America (PIA), including PIA chairman of the board in 1998.

Jesse Williamson, also an SMU alumnus, joined the company in 1970 as a sales representative. Jesse invented or co-invented several groundbreaking printing techniques, including PackMAG, a magazine and direct mail insert carrier; WIMS, a process for integrating metallic inks with process color; Litholux, which enables flexo printing and coating interstation on sheetfed offset presses; and GloKote, a process for applying glow-in-the-dark slurry on offset presses.

The Williamsons joined Joe Novak, director of technology, during his European travels to visit Prism, Esko and the other JDF project participants. "They were [completely] behind it," says Novak. "I have to thank Jerry and Jesse. It wouldn't have happened without them."

See www.twpc.com.



(Above) "I'm not an optimist, I'm a realist," says Williamson's Joe Novak. "I knew this could be done." Below: an extra-wide scheduling monitor. Bottom: Prepress is practically hands-free with the new JDF workflow.



extend that far. Esko, an active CIP4 member, helped draft what became Stripping in JDF 1.2. In a nutshell, including the stripping parameters enables a system to acquire detailed print manufacturing requirements such as page size, numbering and sheet size, paving the way for automatic imposition.

Pieters and the Esko team then worked with a Belgian MIS company to create a prototype, which they showed to Novak. "Knowing Joe's predilection for automation and error reduction, it wasn't surprising that he was wild about this idea," says Pieters.

Novak was excited, but he retained a patient and pragmatic outlook. "I looked at our mixture of equipment and it was very obvious several vendors would have to be involved," he says. "It did take some time [to get everything in place] because CIP4 was new then. As new releases came out, [many of the project's vendors] were upgrading their software so we could achieve what we wanted."

Although the project experienced some delays, Novak says the vendors were quick to respond to his requests and did an excellent job of keeping him up to date. Novak never doubted the group would succeed. "I'm an engineer by training," he explains. "As long as I understand [the concept] and can communicate it, I have no doubts."

Estimating is Job One

The JDF workflow starts in estimating with Prism USA's Prism-WIN print management system. Prism takes in job characteristics (product size, type, quantity, paper stock, customer and so on). The Prism operator also adds any relevant manufacturing capabilities, such as desired press, binding, folding, etc. Finally, all the information is encapsulated into a JDF job ticket exported to LithoTechnics' Metrix job planning software. Metrix appends the JDF with other required manufacturing details, such as trims, bleeds and layout, and sends the JDF file on to Scope, Williamson's prepress production system.

Metrix bridges the gap

While MIS programs do incorporate all the necessary parameters for estimating, certain manufacturing details must be added. That's where Metrix comes in. "You could consider Metrix the missing link between estimating, MIS and prepress," explains Lisa Alterio of Alterio Associates (Boston), LithoTechnics' North American distributor. "Often in an MIS, basic layouts are lacking some details required [to move the job along] for manufacturing. These jobs might have all the estimating department's material, but when it gets down to actual manufacturing, more information is needed."

Metrix imports the JDF with the basic job specifications and automatically calculates the appropriate layout for the product size, press and paper stock contained in the JDF job ticket. Using Metrix, Williamson can respond on the fly to equipment, stock and other changes—new layouts can be recalculated almost instantly. The Metrix operator also can add production-specific parameters such as trims and bleeds. JDF files essentially can leave Metrix "smarter" than when they arrived.

"Metrix appends data to the JDF it consumes," says Alterio. "In other words, the incoming JDF sent from Prism is appended with Metrix layout data and then passed along to the next production step."

Scope has the straight dope

BackStage, the workflow server component of Esko's Scope suite, is the hub of Williamson's prepress operation. Scope consumes the "complete" JDF job ticket generated by Metrix and initiates plate-ready image assembly virtually unattended by desktop imposition applications and personnel. Scope also can create JDF files containing ink presets as well as cutting and saddlestitching information.

"With JDF, rather than print out a work order, Williamson launches JDF files from its MIS to Scope," explains Pieters. "This creates the job in Scope as well as sending useful information to prepress people, such as the number of plates they have to make, the job's colors and the finished page sizes." A second JDF file, the one Metrix sends, contains all of the stripping details.

Pieters further notes that detailed imposition information contained in the Metrix-appended JDF job ticket enables Williamson to automate its entire prepress department.

Prior to the JDF implementation, Williamson relied on a cumbersome three-step imposition process. First, the estimating department did a rough draft. After an order was accepted, the planning department generated a detailed production plan. Finally the prepress department created the "real" plan in Scope. Prepress operators were re-entering the information from the planning department and adding content/page files, registration and sheet marks as well as any other imposition details.

"Now the double work of creating an imposition is entirely gone," says Pieters. "That saves work and ensures prepress output is fully synchronized with what the planning department specified."

Finally, Heidelberg presses equipped with the new JDF interface receive instructions from Prism such as number of impressions, stock type and so on.



Above: Williamson Printing Corp. has seven sister companies. Below: Many of the company's awards are displayed proudly in the lobby.



How's it going?

James Mauro, Prinect product manager for Heidelberg USA (Kennesaw, GA), senses a change in general JDF knowledge. "Years ago, I was evangelizing JDF on behalf of Heidelberg. It was always the lead part of the conversation as I traveled around. We spent a lot of time educating people on the basics. Now it seems a lot of companies are highly interested in integrating and streamlining their workflows. There seems to be a greater acceptance and awareness."

But Mauro, like the rest of the Williamson integration team, cautions that JDF still is far from a plug-and-play proposition. And CIP4 still is working on the specifications for finishing.

"We have JDF/PPF-compatible folders, stitchers and cutters, but the specifications haven't been fully defined yet," says Mauro. "Heidelberg takes a firm stance on JDF compliance—we won't modify it for our own purposes. We will comply only with what the CIP4 organization defines as the spec."



Williamson's Heidelberg presses equipped with the new JDF interface receive instructions from Prism, such as number of impressions and stock type.

Holla back

Williamson has used Prism across multiple locations since 2002. Leland Morgan, GM for Prism-USA (Wilmington, MA), says the Texas printer was looking for a program configurable to its specific needs. "One of the challenges is that Williamson is innovative, always at the cutting edge," says Morgan. "They might call and ask for something that's not mainstream, but you watch, and in a couple years, it is."

Prism worked closely with Heidelberg to perfect the Job Messaging Format (JMF) coming back from Williamson's presses. JMF allows a controller to communicate to a JDF MIS or workflow system information such as events (start, stop, error), status (available, offline, stalled, etc.), results (count, waste, etc.) and other details.

"What happens is the piece of equipment collects too much data," explains Morgan. "It's collecting data every couple of seconds, every little thing that happens in a week. That amount of information coming back to an MIS system becomes useless, essentially just clogging the lines up. So we needed to find ways to collect only the relevant data."

What's next?

Although Williamson has made great strides in its mission to eradicate islands of automation, Novak says the company still has more to do, particularly as the JDF requirements for postpress operations evolve. "We're not finished yet," he says. "Whatever we can automate, we will. We're working on a soft proofing application, which will involve a JDF-based link

James Mauro, Prinect product manager, Heidelberg USA (Kennesaw, GA), adds that about a year ago, Williamson began investigating the logistics of using Prism and Heidelberg's Prinect Data Control to generate an electronic job ticket to preset its presses.

Prinect Data Control enables open and standardized communication between MIS and production workflow systems. Job data is transferred online, eliminating the need for manual input and enabling users to access this information throughout the entire production process. Once a job has been completed, workplace and job-specific performance data flows back to the management information system in the form of press and operating data.

"We have some successful Prism/Prinect Data Control integrations in the UK, so we arranged for the Williamson crew to visit one of them, Stones Printing. Joe and the Williamson team liked what they saw and said, 'Let's do it,'" says Mauro. "We delivered Data Control about three months ago. The Heidelberg and Prism people converged upon Williamson to install and integrate the system, and it's been going well."

between Scope and ICS' Remote Director."

Williamson also is one of the few companies that can accept and process JDF from customers. "It will take a while for designers to get used to it," Novak concedes. "But we're ready." ❁

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