



Lean on Print

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Streamline Before You Automate

SIMPLE

An easy way to learn the six broad steps of a Lean process improvement campaign is *Simple*.

1. **S**teamline processes
2. **I**ntegrate functional silos
3. **M**anage change
4. **P**romote innovation
5. **L**isten to your customers and employees
6. **E**njoy sweet success!

Over the coming issues we will explore many of the ideas within each of these steps.



Dear Timothy,

I hope you will benefit from this inaugural issue of *Lean on Print*, a monthly e-zine which focuses on process improvement and Lean methods in the graphic arts industry. From front office business processes to manufacturing processes in prepress, the pressroom, and bindery, *Lean on Print* provides practical solutions and guidance toward reducing cost and cycle time, while increasing quality. If you think others will find this useful, please use the link at the end of the e-zine, **Forward Email**, to share this with your associates and customers.

Print remains a viable and exciting medium to express ideas, promote business, and entertain. *Lean on Print* will help you keep this medium profitable!

JDF and MIS - The Blood of the Digital Smart Factory



The following is an excerpt from my presentation at the JDF User Conference in St. Petersburg, Florida this past November.

Going way back in time, those of you with good memories may remember that the Print Production Format, or PPF, came out as version 1.0 in May of 1995 - over thirteen years ago. PPF, or CIP3 data as some of us call it, evolved into an extremely useful format for presetting ink keys and presetting cutting and bindery equipment. CIP3 went through an ambitious change as an organization as we morphed into CIP4. Our mandate was to create a specification, today a standard, for integrating all processes in prepress, press, and postpress. We're not quite there yet, but we've come a long way and printers now have practical tools to move a company forward to lights out production.

The NAPL has a small organization of thought leaders that gather under the banner of the Digital Smart Factory - a group that is always pressing forward toward the "ideal" of lights out manufacturing. I bring this up because what we are here to discuss today, JDF, is the blood of the digital smart factory. Yes, it does need the occasional hour on dialysis or even a transfusion once in a while, but the blood none the less.

The Blood of the Digital Smart Factory

Suppliers finally have a common language that they can use to speak to

Tim Daisy's career and interests have focused on business process improvement through the application of innovative management and production techniques and philosophies. He has spoken and published on subjects ranging from computer integrated manufacturing to finite scheduling and is an active contributor to the CIP4 organization, currently serving as Membership Officer on the Board of Directors.

Tim received his Bachelor of Science in Mechanical Engineering with High Distinction from Worcester Polytechnic Institute and has pursued a career in process improvement in the semi conductor and printing industries.

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each other. An industry consultant just prior to Graph Expo asked the question, "Is JDF dead?" He asked this because he's not hearing about it in supplier press releases nor is he seeing it in descriptions of supplier participation at the recent Graph Expo. His observation is correct, but I don't believe the conclusion implied by his question is accurate. Take a look at Muller Martini's Connex - a workflow system that proclaims to connect new Muller Martini equipment and older Muller Martini equipment, as well as other vendors' bindery equipment into a connected workflow. JDF is the blood of this solution. manroland's PrintNet workflow connects older and new manroland equipment into a digitally connected workflow plus connectivity to MIS. JDF is the blood of this solution. Prism's QTMS production management system connects any make or model of material consuming and producing equipment into a managed material workflow. JDF is the blood of this solution. The CIP4 organization demonstrated a JDF Live connected workflow at Graph Expo. JDF, of course, was the blood of that solution.

Do vendors sing to the press about our JDF capabilities? They certainly did a number of years ago. But today they simply sing about the ROI from reduced cycle time, reduced waste, and increased quality. This is what printers demand. JDF allows many suppliers to achieve this in a more cost effective manner.

Consistent and Repeatable

So how does one go about "installing JDF"? I believe it begins with the MIS. And use of an MIS to drive an automated operation requires a management commitment to performing business in a consistent and repeatable way.

I had a conversation last month with Grant Fritch and Mike Sargent of Walsworth Publishing Company. Walsworth is a very successful book, yearbook, and general commercial printer with plants in Missouri and Nebraska.

Grant told me the following, "If you don't know what you're going to make, or who you're making it for, automation won't work."

Now, personally I think this is a bit of a black and white statement, but the spirit of his statement is right on. The successful use of JDF by an MIS relies on simplified and streamlined operations with a clear and repeatable process and a clear and achievable objective.

Let's face it, connectivity and automation achieved by digital systems, must be definable and repeatable, black and white, zeros and ones. Over the past three years Kodak's Prinergy prepress workflow solution has given printers the ability to achieve lights out prepress through their Rules Based Automation functionality. But rules are rules and if your processes are not performed in a consistent and repeatable way, the rules will not always apply. The technology is certainly available and capable, but the management commitment to performing processes in a consistent and repeatable way is necessary to make the technology successful - to make the cost savings of JDF a reality.

So, step one is an MIS implementation based on clear and repeatable processes and clear and achievable objectives. Of course, the foundation of your MIS should be a system with a robust and published API, or application programming interface. An XML-based API would certainly be helpful. Most MIS API's are either based on JDF, or can use JDF where necessary.

Step 2? Take a look at those management objectives defined in step 1. Look at where integration across software platforms and production systems and hardware can help achieve and/or support these objectives. Are you looking to update your press schedule based on the production of plates in prepress? Then look at what type of JMF messages may be available from your prepress workflow and how your MIS can use these to satisfy this pre-requisite for press. Do you want to implement an electronic job ticket that can be dynamically changed throughout production based on customer change orders or other material availability or process changes? Then look to create one, or more, JDF files that can be sent real-time to JDF enabled equipment for automatic setup, or at least to give set performance expectations to operators. There are very few limits to integration between MIS and other systems. The integration may not be JDF, but integration nonetheless.

With the proper MIS, integration and automation across your production processes is certainly within grasp.

For printing industry vendors consider this. Your solutions are one piece of an overall workflow that your customers are consistently trying to simplify and streamline. Your solution, therefore, needs to work together with the preceding and proceeding steps in the process. JDF is a cost effective way to make this happen. It's the blood of your customers' operations. Try to keep the time on dialysis to a minimum.

For printers, automation and connectivity goes right to the bottom line. JDF is an enabler. But if you don't know what you're going to produce, or who you are making it for, automation and connectivity will be a disappointment for you.

JDF is alive and well. The suppliers who enable it and the printers who manage it will be reaping the rewards for many years to come.

Lean Tool

Prism's QTMS Production Management System enables lean manufacturing by measuring and controlling all aspects of material flow and manipulation through a printing process. Dead-on counts; WIP, pallet, and insert tracking; and inventory control all enable the Lean approach of the Plant Mass Balance. We will be exploring the mass balance approach to process improvement in an upcoming issue.

