

# The Printer's Customer: Where Automation Begins

by James E. Harvey, Executive Director of the CIP4 Organization

Immediacy, everyone wants it. Immediacy is the time it takes to move a message from concept to the final consumer or audience. Your motivation may be different. If you're message is conveyed by direct mail you are expecting sales; if you are an advertiser in a magazine or newspaper you are expecting a response, increased store traffic or a change in some other metric; if you are a cataloger you are expecting sales via the mail or through your website; and so on. No matter what your motivation is for producing the message there are many reasons to move that message quickly and no reason to hold it back.

If you are in the business of producing messages — whether as a publisher, corporate marketing communications (MARCOM) professionals, advertising agencies, catalogers, whatever (we'll call everyone "publisher" from here on out) — you desire more immediate means for delivering the message and eliciting a response. There are real financial ramifications to being more immediate and this is an advantage that the Internet or television advertising have had over print recently, regardless of the ability of print to deliver better quality and to convey more meaning.

## Print as Immediate to the Market as the Internet and Broadcast ... huh!?!

So what's happened recently that brings printing back into the media mix? Publishers have the ability to initiate and directly drive print jobs produced at printing companies with zero latency; same day or next day delivery to the consumer. Combined with print's advantage in quality and message conveyance, not only is printing competitive with electronic media, it has the advantage. Internet advertising sounds like it's instant, but in practice it takes days for Internet ads to proliferate and it may take weeks for pages published on the Internet to become widely referenced and to make significant gains on the search engines. Broadcast isn't instant either, production of television spots can take weeks or months and even if you are ready with preproduction, distribution to broadcasters must be planned out well in advance.

I'm not saying all forms of printing are now competitive with electronic media; actually this statement is pretty specific to digital printing fronted by web-to-print systems, but the standards and tools that are available today to completely automate every aspect and put the publisher behind the wheel are becoming available for other printing applications. The same techniques can be applied to periodicals, catalogs and books produced on conventional printing equipment — anything with fixed layout specifications that is produced periodically and can be defined in advance of finalizing the layout.

Diron, Kodak, Objective Advantage and Duplo have presented a seminar for a few PIA Affiliates in which they demonstrate, using currently available tools, a digital printing job that is touched just three times by anyone other than the publisher:

- 1.) Once to load the paper to the printing press and hit "go," (and this step can be optionally eliminated),
- 2.) Once to move the paper to the finishing machine, and
- 3.) Once to put the finished product in the mail.

There are certainly other tools that can be used in integrated web-to-print digital printing (see [www.cip4.org/marketplace/](http://www.cip4.org/marketplace/)), but these four companies had the right combination of products to maximize optimization for the purposes of the seminar.

## Ingredients for the Magic Sauce

There are a few factors that make this degree of automation possible. First of all, in web-to-print applications the "template" that the customer modifies or ads content to is predefined and tested. This means that the trim size of the printed piece is known, the stock is predetermined, imposition options

can be calculated in advance regardless of the number of pages for each printing, color conversion and other prepress operations can be automated, and the parameters necessary for printing and finishing can be defined before the job is ever created. No operator has to “plan” the job at the printer’s plant and scheduling is automatic.

Secondly, all the systems can exchange ever increasing job detail via Job Definition Format (JDF). What JDF does mean is that the cost of integration between system *and* between companies is greatly reduced, as each system is designed to work with JDF and not the proprietary interfaces of a zillion other systems. It’s the systems that do the work; JDF by itself does nothing, it’s just a standard language that systems in our industry can share. In the seminar version, Objective Advantage’s OASymbio takes the production files and XML from the Diron front end, calculates the imposition, and then combines this information with the established parameters to provide JDF to both the printing press and the finishing device.

Third, the customer known and is accepting of soft proofing. There is no need to analyze each job to create an estimate, payment may be made online, the billing and shipping instructions are captured, images can be restricted to printable resolutions. Because the templates for the jobs are defined in advance, once submitted to a product like Kodak’s Prinergy, prepress tasks such as color correction, trapping and so forth can be fully automated and preflighting can either be eliminated or can loop bad jobs back to the customer automatically. All the savings in time would be lost if a hardcopy proof needs to be sent to the customer, so the final ingredient to the “secret sauce” is soft proofing and proof or PDF file is produced and approved by the customer before the job even moves to the printer’s production queue.

All that is left is for the press operator to select the job from the queue, load the required paper and hit go. Then the job is moved off the back of the press to the finishing device, in this case a Duplo folder/creaser/cutter and once again the operator selects the job, loads it oriented according to an image of the job provided by the system, and hits “go.” Duplo calls this “near-line” printing. Of course you can tightly couple a finisher and a press, but then you are limited to the pace of the slowest device, limited in type of work one press can support, and if either device goes down, the whole line goes down. By keeping the devices separate, but automating setup with JDF-enabled tools, the system can select the best combination of equipment to get the job done.

As illustrated below, there is both time and labor saved from the production process. No CSR is needed, as the printer has effectively off loaded much of the CSR’s functions to the customer. Prepress is “lights out”, with the exception of the original setup done when the template is designed and tested and trouble shooting and the pace of work is the speed at which the computers can process the job. Finally, the operator time for both the press and finishing systems is reduced to the barest minimum. With fully integrated web-to-print digital printing there’s no setup, make ready, or change overs. In effect, all resistance has been removed from the process allowing the work to flow from the publisher to shipping as fast as possible.

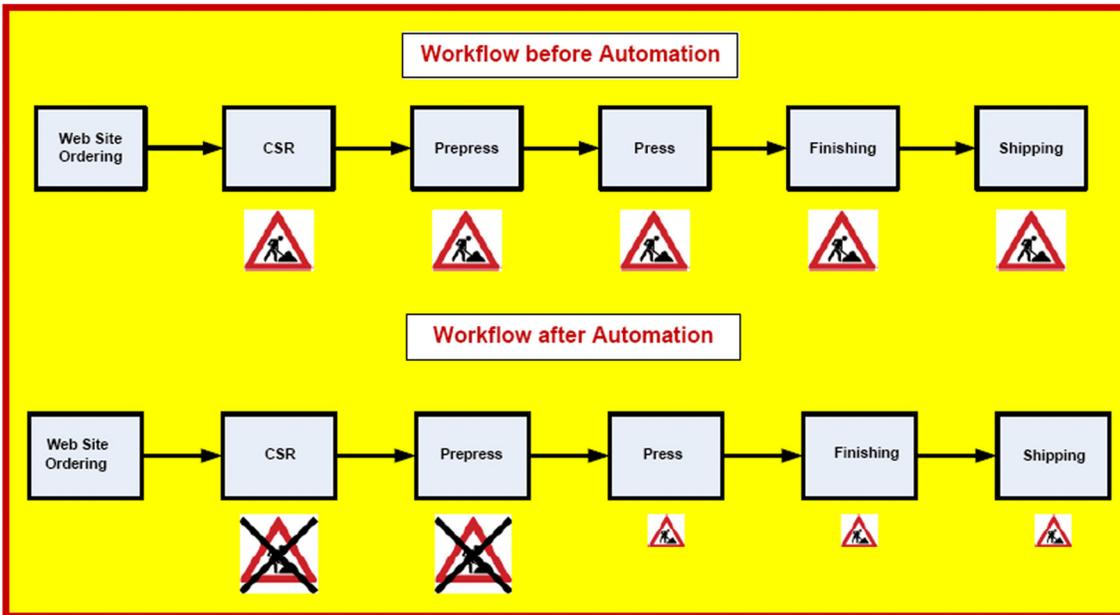


Figure 1. Time and Labor Savings. Courtesy of Objective Advantage, Inc.

### Sure, that's great if you're knocking out business cards all day, but what about the rest of us?

Prior to 2006 the software and systems that used JDF as the glue in integrated process automation were largely relegated to tools for printers, prepress services, and bindery services. Last year both Adobe and Quark release layout tools that allow the designer or print buyer to originate JDF job tickets. For jobs that reoccur, printers can setup JDF “templates” that are used by the layout application so that when the job comes in the same process as described above can be put to work, albeit with more variations in equipment and more complex jobs. For an example see the winning CIPPI Award case study, the category of “Biggest improvement in efficiency and customer responsiveness as a result of process automation,” from Druckerei Köller + Nowak GmbH at <http://www.cip4.org/cippi/>.

The publisher's participation is critical to getting the most out of print production automation and to improve immediacy. In effect, printing is a form of manufacturing where the entire production line is changed or “retooled” for each job, but the configuration of the production “line” is entirely dependent on the job's specifications and the design and content created within the layout application. Without the customer, specifications are still being re-keyed, each set of production files needs to be analyzed, preflight, the job still needs to be scheduled and planned by a human and so on. This does not mean dumping a huge burden on the publisher; Köller + Nowak are able to train customers to be part of their automation in just 30 minutes via WebEx. All you are doing is capturing the job specification and details important to the production of the job where they originate — it's just that simple.

Of course, the degree of automation I describe is only possible if the job is a reoccurring job with consistent stock and set of specifications. Consumer catalogs or magazines are great candidates. There are some limitations. Special attention is required if your publication has heavy versioning, inserts, exception pages (such a one time three-panel gatefold cover), if production is by signature and not the entire document, and other variations that are not predictable. Perhaps not everything can be produced “lights out”, but the tools are available to extend the immediacy that was only available to web-to-print digital printing to jobs produced via conventional printing.