

# Job Definition Format (JDF)— opening the door to automated print production

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Today's print providers face a unique challenge. The pressure on printers from internal and external sources is mounting to achieve higher level process improvements as a way to remain competitive. But the present print production architecture lacks the built-in capabilities necessary to realize these improvements. In response to the customer demand for higher quality products at lower costs with shorter turnarounds, enterprises have implemented sophisticated ERP and asset management systems to better manage the flow of information and work throughout the company. But to date, the print production process has remained largely out of step with these changes—and printers have been left with the unenviable task of “making it work” on a daily basis.

Although many process improvements have already been achieved, today's typical print production workflow still comprises multiple machines and functions—from multiple manufacturers—all necessary for the completion of a print job but incapable of working together as a cohesive unit. Not only do these diverse systems and processes demand excessive manual intervention, they are prone to error and do little to capitalize on the adaptive capabilities of enterprise business systems. In effect, they represent “islands” in the print production process. In the mid-1990s, the demand for greater print production integration and automation spawned a number of proprietary specification formats aimed at addressing these shortcomings. However, limitations inherent in the proprietary formats impeded their widespread adoption; the industry has, after all, seen the rise and fall of proprietary—in other words, “closed”—systems at least once already.

## JDF—an open solution

Fortunately, a new solution is emerging that promises to deliver on the industry's goal of streamlining the print production process—Job Definition Format (JDF). Developed in a joint partnership between graphic arts leaders Adobe, Agfa, HEIDELBERG, and MAN Roland, JDF offers an open, nonproprietary, standards-based format that allows all system solutions providers to leverage this technology. By virtue of its open specification, JDF will create a level playing field for all vendors, enabling a democracy of functionality that will benefit both printers and their customers.

Based upon the open eXtensible Markup Language (XML) managed by the independent World Wide Web Consortium (W3C), JDF has the ability to carry a print job from genesis through completion, bridging the gaps between disparate components and processes and relieving the stresses that are common in today's print workflow. JDF allows the description of all the processes needed to complete a print project: from job submission through prepress, press, and post-press. What's more, JDF connects the “business of printing” (the process steps) with the “print business” (the enterprise) by offering a means of communicating with existing information systems and ERP and CRM software. Without the constraints of disconnected, labor-intensive production workflows, print professionals will be able to produce materials more quickly, efficiently, and reliably, freeing them to focus on the quality of their products and to differentiate themselves from their market competition.

# JDF and Adobe PDF—from desktop to delivery



## The foundation: Adobe® PDF

In many ways, the print industry has already been primed for the arrival of JDF by another innovation: Adobe PDF. Building upon the first revolution in print production sparked almost 20 years ago by the advent of Adobe PostScript®, Adobe PDF has taken process improvements to the next level by eliminating some of the most common errors in the print process. By bundling native files, fonts, and attachments into a single cross-platform package that is smaller than the sum of the original components, Adobe PDF provides printers with one file that can be used to both RIP and trap the print job, resulting in a faster, less error-prone process.

This enhanced reliability has resulted in the adoption of Adobe PDF as a broad-based standard. Printers have largely moved to PDF workflows as a way to resolve problems encountered when RIPing native files. By creating a PDF of the native file, production managers can RIP files more predictably. But these benefits are just the beginning. In order to meet the demands of the marketplace, print providers must realize workflow efficiencies that extend beyond the prepress arena. Adobe PDF provides the foundation upon which to build this next tier of process improvements—and it is uniquely suited to do so. By streamlining the print job and all its ancillary files into a single package, Adobe PDF offers a perfect platform to host and reference additional information that can ease the print job through the production process, namely, Adobe XMP and JDF.

## The integrator: Adobe XMP

Adobe Extensible Metadata Platform (XMP) is a labeling technology that allows users to embed data about a file, known as metadata, into the file itself. For example, data that includes meaningful descriptions and titles, searchable keywords, and up-to-date author and copyright information can be captured, either manually or automatically, during the content creation process, such as a photo shoot. This data then travels through the production workflow, providing a quick, reliable means of tying these creative assets into existing information management systems. Further, XMP enables the flexible search and retrieval of media across diverse formats and databases, and it facilitates workflow automation, as content management systems can be customized to automate tasks using the XMP metadata.

Like JDF, XMP is based upon W3C standards and is available as an open license. And XMP support is already included in many popular Adobe software applications including Acrobat®, Illustrator®, InDesign®, and Photoshop®. This enabling technology is already at work today, offering a convenient means for integrating creative assets into the enterprise. But whereas JDF focuses squarely on workflow automation, the strong suit of XMP is integration..

With the Adobe Creative Suite, Adobe PDF, and JDF technologies, the print production workflow is more streamlined and manageable. Improved communications and workflow automation boost productivity and efficiency, lowering costs and increasing printers' profitability.

## The automator: JDF makes the workflow flow

Like XMP, JDF can be introduced into the production workflow at the onset of the creation process—literally on the desktop. And it is gaining widespread adoption as a key element for implementing a totally automated workflow. JDF specifies a messaging architecture that enables communication between multiple JDF-enabled devices—even those from different vendors. Users can capture job-specific information early in the workflow and then manually append additional details such as delivery, estimation, and contact information, as appropriate, later in the production process. For example, JDF can facilitate the ordering and coordination of auxiliary materials that accompany a printed piece, or it can interface with other databases such as CRM software and supply chain information to further integrate the print and business workflows.

In essence, JDF is the new electronic job jacket for the automated print production workflow. It defines the contents of the job, identifies the steps required to complete it, and helps to organize the assets and production tools necessary to deliver the final printed piece. Moreover, it bridges the islands in the print production process by providing a common language for device interactivity. As a JDF file moves through the print workflow, it can collect and disperse pertinent information to a master job controller, making it easier to manage available production throughput and maximize productivity. JDF can even capture color settings on its trip through prepress and automatically set the ink fountains on the press or help set up JDF-enabled bindery equipment.

A typical JDF-enabled print production workflow may begin with a photo shoot, where XMP can automatically embed data to integrate the newly created assets into the enterprise's information management systems. Then, with the Adobe Creative Suite, the design and layout are created and all necessary job components collected to introduce Adobe PDF and JDF into the production workflow. Together, Adobe PDF and JDF describe all the elements of the job and what process steps are required to complete it. And without the traditional job jacket—the most common source of errors—the print job can work its way through the production process efficiently and with the least possible human intervention. Customers receive the finished product they desire, and printers are able to provide it to them with considerably greater ease.

## Next steps for JDF

JDF is the next logical step for print providers faced with the daunting challenge of adapting their processes to the realities of the new economy. Backed by the commitment, experience, and standards-based development of companies like Adobe, JDF is poised to become as important to the industry as PostScript and Adobe PDF.

### FOR MORE INFORMATION

For a comprehensive overview of JDF, visit [www.adobe.com/jdf](http://www.adobe.com/jdf) or send an e-mail to [printing\\_promotion@adobe.com](mailto:printing_promotion@adobe.com).



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