

The SeyboldSM REPORT

Vol. 7, No. 4 • February 22, 2007

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Adobe Takes PDF to ISO 12

THE EMERGING BATTLE OVER FORMATS FROM DIFFERENT DEVELOPERS SHOULD also be seen as a fight for the future of publishing, where all players must be able to exchange data for cross-media publishing, including variable data for Web and print. Everybody's talking XML, the de facto lingua franca. But which kind of XML? Graphic arts professionals and others working with publishing across different media and platforms should study what's happening in the file format market very carefully and should closely follow developments over the coming months.

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PUBLISHERS AND THEIR PRINTING PARTNERS HAVE BEEN FOLLOWING THE PROGRESS of the JDF specification since its introduction in 2000 — with good reason. As a standardized automation interface for print manufacturing, JDF has the potential to reduce costs not only in the prepress, pressroom and finishing spheres, but also in fulfillment and delivery, and ultimately for the entire publishing and print procurement lifecycle. It will also affect time-to-market cycles — an ever-pressing concern for print-based communication. As the next version (1.4) of JDF approaches, we examine some of the particulars and their implications.

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The Latest Word

MEMS the Word: Variable Droplet Inkjet Head Technology Has Implications Beyond Signage

BY DAVID ZWANG

Dimatix Inc., a wholly owned subsidiary of Fujifilm Corp., recently announced a new inkjet technology breakthrough. Its new VersaDropT offers another new development in the rapidly evolving inkjet market. This new technology will enhance its current proprietary drop-on-demand Shaped Piezo SiliconT MEMS (Micro electro mechanical systems) head technology.

Historically in the application of inkjet printing technology there has been a trade-off between speed and resolution. Speed has been addressed by adding jets composed of multiple nozzles per head and multiple heads per configuration. The increase in resolution and gray-scale depth has been handled by reducing the size and increasing the distribution of the ink droplets. Inkjet droplet size is measured in Picoliters (a trillionth of a liter).

Prior to 1995, a typical inkjet cartridge housed 50 nozzles. In 1995 HP introduced the first 300 nozzle black cartridge and 192 nozzle color cartridge. HP's recent introduction of its Z3100 wide-format printer includes six HP 70 printheads, each printing two colors of ink with 1,056 nozzles per color. At the printhead scan axis in one pass they achieve 600-dpi linear resolution. While they can control the amount of droplets fired, they always put out the same drop size and they increase the resolution by increasing the number of passes, which as a result reduces throughput. Current inkjet proofer/printer technology uses droplet sizes as small as 1.5 picoliter.

However, with the new Dimatix technology, they can vary the size of the drop fired rather than just the number of drops fired or the number of passes by the printhead to create each pixel. One Dimatix

M-300/10 Jet Module includes 304 nozzles spaced in a single row of jets at 180 nozzles per inch. Their native droplet size in this module is 10 picoliters with a velocity of approximately 8 meters per second. This should give them the ability to control resolution without reduction of throughput. This control also allows them to address fine tonal gradations and crisp 4-point text printed within the same job.

In addition, each channel can be addressed individually and each ink drop can be tuned independently. For example, one channel might be called upon to fire a 10-picoliter droplet, while one adjacent channel fires a 30-picoliter drop and the other produces none at all. Because the precision of their design allows each channel to be addressed individually and each ink drop to be tuned independently, any number of ink channels can be programmed to behave quite differently and on every firing cycle if necessary. Since the announcement of the new VersaDropT technology, Dimatix has also announced that it now also has an inkjet printhead cartridge that can fire a 1-picoliter droplet, lowering the bar even further on drop size.

Interestingly, while Dimatix works with OEMs that support industrial printing applications such as signage, POP, decorative, textile, packaging, etc., its technology is also used in a variety of other markets, including electronics, life sciences, chemical, optical, and many other nanotechnology applications. In fact, inkjet technology is playing a significant role in many fields outside of ink-on-paper printing.

These new Dimatix technology developments are just a few of the many issues confronting inkjet printing today.

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The Seybold Report (ISSN: 1533-9211; USPS 020-953). Subscriptions are available in the U.S./Canada for \$599 per year and Internationally for \$650 per year (24 issues mailed semimonthly). **POSTMASTER:** Send address changes for **The Seybold Report** to: Seybold Publications, c/o RISI, PO Box 16586, North Hollywood, CA 91615-6586. Periodicals postage paid at Westmont, IL and at additional offices.

Print Is Learning to Set the Pace

BY JAMES E. HARVEY

Publishers, corporate marcom professionals, advertising agencies, catalogers — in short, anyone who's in the business of producing messages for a large audience — naturally want their message delivered as quickly as possible, if not sooner. Quicker delivery means faster response and that has real financial value:

- Advertisers want to respond to changes in the market and competition faster.
- Publishers want to deliver content that is fresher and more compelling.
- Retailers and catalogers want to maximize the pace of inventory turnover and flush stalled products from their shelves.
- Publishers want to accept later ad changes insertions in order to increase ad revenue.
- Catalogers want to minimize catalog obsolescence by improving the direct relationship between inventory, current pricing and the catalog in the consumer's hand.
- Marketers want to reduce the costly time between new product introduction and sales.
- Marketers also want to quicken the pace of lead generation by beating the competition to the consumer with their latest offers and incentives.
- And so on, and so on, and so on...

For many of these message producers, the speed of the Internet and television would seem to trump the value of print. Over the past few years, however, the gap in delivery speed between the Internet and television and print has narrowed so that publishers can get their message out quickly while still taking advantage of the better quality and more meaningful content that's inherent in print. Publishers can now initiate and directly drive print jobs produced at printing companies with zero latency, offering same-day or next-day delivery to the consumer.

Not So Fast

Internet advertising might seem instantaneous, but in practice Internet ads take days to proliferate and it can be weeks before pages published on the Internet are widely referenced and make significant headway on search engines. Broadcast isn't as instant as it would seem either, since producing TV spots can take weeks or months and distribution to broadcasters must be planned well in advance.

That's not to say that all forms of printing can compete with electronic media, but it is true for digital printing fronted by Web-to-print systems where

standards and tools available today can completely automate every aspect of the print process. These techniques can be applied to anything with fixed layout specifications that is produced periodically and can be defined in advance of finalizing the layout, including magazines, catalogs and books produced on conventional printing equipment.

Want proof? Diron, Kodak, Objective Advantage and Duplo conducted a seminar for a few PIA affiliates in which they used currently available tools to demonstrate a digital printing job that is touched just three times by someone other than the publisher:

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

Other tools can certainly be used in integrated Web-to-print digital printing (see 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

Several factors make this degree of automation possible. In Web-to-print applications, the "template" that the customer modifies or adds content to is predefined and tested. This means that the trim size of the printed

Continues from p. 2.

Many other issues, including ink science, droplet speed, position and distribution, and other aspects of head and transport technology are currently under development at a frantic pace. We will continue to see significant growth in both the development and application of inkjet technology in the much broader applications of manufacturing and science and as a result, we will also see new developments in the application of this technology in commercial printing. This will undoubtedly have a significant impact on commercial print as we know it in the future.

Xplor 2007 Seeks to Fill the Information Gap

This year's Xplor conference, recently

combined with the regional Graphics of the Americas trade show in Miami, will offer an expanded educational offering for an anticipated 500 attendees, according to show organizers. The event, dubbed the Xplor Document University (XDU), will run from Feb. 28 to March 4 and will include 22 individual courses, four "Document Knowledge Forums" and three best practices forums. The sessions cover a wide array of technical, sales and strategic management topics, embracing virtually every aspect of digital document production.

A new "college," called the PDF University, will be added to the program this year. This workshop for advanced PDF users will be led by industry luminaries David Zwang and Stephan Jaeggi. (The XDU faculty list reads like a who's who of

printing and publishing.) Other course offerings include color, content management, JDF, operations and XML-specific technical sessions.

If there's a problem with the XDU event, it is that there are too many courses to choose from. Many companies are sending teams of key people, with each individual assigned to courses pertaining to his or her field of interest. XDU is clearly seeking to fill an information gap in a rapidly changing print production environment.

Post-9/11 conventional wisdom holds that the age of big industry conferences is over and that online learning will supplant more traditional venues. If Xplor's efforts are successful, it will prove that live events — with comprehensive course offerings and an opportunity for face-to-face interaction — are still very much in demand. **TSR**

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.

JDF

Secondly, the amount of job detail systems can exchange via job definition format continues to grow. JDF greatly reduces the cost of integration between systems and companies as each system is designed to work with JDF and not the proprietary interfaces of a zillion other systems. JDF is just a standard language that systems in our industry can share. By itself, JDF does nothing; it’s the systems that do the work. In the seminar demonstration, Objective Advantage’s OASymbio took the production files and XML from the Diron front end, calculated the imposition and combined this information with the established parameters to provide JDF to both the printing press and the finishing device.

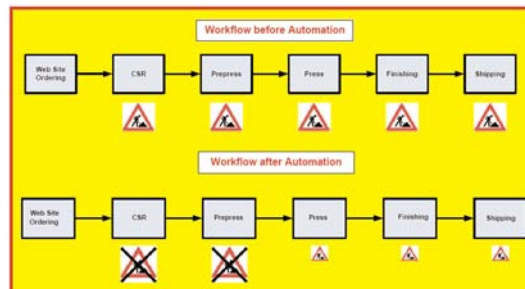
Soft Proofing

Finally, if the customer is able to accept soft proofing, there is no need to analyze each job to create an estimate, payment can be made online, the billing and shipping instructions are captured, and images can be restricted to printable resolutions. Because the templates are defined in advance, once a job is submitted to a product such as 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. With soft proofing — the final ingredient to this “secret sauce” — the 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 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 and the type of work one press can support. Moreover, if either device goes down, the whole line grinds to a halt. 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, time and labor are saved from the production process. No customer service representative (CSR) is needed, since the printer has effectively off-loaded much of the CSR’s functions to the customer. Except for the original setup done when the template is designed and tested, prepress is “lights out.” Troubleshooting and the pace of work are limited



Time and labor savings. *Courtesy of Objective Advantage Inc.*

only by the speed at which the computers can process the job, and the operator time for both the press and finishing systems is reduced to the barest minimum. Fully integrated Web-to-print digital printing requires no setup, make-ready or changeovers. Once all resistance has been removed from the process, the work can flow from the publisher to shipping as quickly as possible.

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

Before 2006, the software and systems that used JDF as the glue in integrated process automation were largely restricted to tools for printers, prepress services and bindery services. Last year both Adobe and Quark released layout tools that allow the designer or print buyer to originate JDF job tickets. For recurring jobs, printers can set up JDF “templates” in the layout application so that the job can undergo the same process as described above, albeit with

more variations in equipment and more complex jobs. (For an example, see the winning CIPPI Award case study in 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/>.)

JDF and Publishing

Publisher participation is critical to getting the most out of print production automation and improving efficiency. Printing is a form of manufacturing in which the entire production line is changed or “retooled” for each job, but the configuration of the production “line” depends entirely on the job’s specifications and the design and content created within the layout application. Without the customer’s participation, specifications must still be re-keyed, each set of production files still needs to be analyzed in preflight, the job must still be scheduled and planned by a human and so on. Participation doesn’t mean dumping a huge burden on the publisher. In just 30 minutes via WebEx, Köller + Nowak can train customers to be part of its automation, capturing the job specification and details important to the production of the job where they originate. It’s that simple.

Where Automation Works Best

Of course, the degree of automation I describe is only possible with recurring jobs with consistent stock and a consistent set of specifications, such as consumer catalogs or magazines. Bear in mind that 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 every job can be produced “lights out,” but today’s tools can extend the immediacy that was previously available only in Web-to-print digital printing to jobs produced using conventional printing methods.

TSR

James E. Harvey is executive director of the CIP4 organization. CIP4 is an international standards organization whose mission it is to develop standards and to provide education and resources to foster the adoption of process automation in the printing industries.

Shedding Light on Adobe's Lightroom

BY RON ROSZKIEWICZ

Lightroom is not Photoshop-lite or Album on steroids, but a worthwhile addition to every photographer's toolkit.

A little over a year ago, Adobe released the first public beta of a new application called Lightroom. Originally only available for the Macintosh, Adobe later released a Windows version of Lightroom, too.

At the same time, Adobe opened up communication between beta users and developers with a set of online forums. The forums were quite active and the dialogue seemed most useful. Besides providing a level check on how the user interface and functional set were progressing, the forums also served as a medium for official and unofficial expectation setting. This was a tricky business since positioning Lightroom in an

Most of the beta testers' major requests were satisfied and the resulting product has its own personality and place in the industry.

industry dominated by Photoshop and newly arrived competition from Apple's Aperture had to be considered. Lightroom is too big to fit in a plug-in and as a standalone application represents Adobe's newfound willingness to develop vertical applications.

A DAM or not a DAM. As an avid follower of online forums and Podcasts, I believe that the results represented in Version 1.0 of Lightroom have to be considered a glowing success. Most of the beta testers' major requests have been satisfied and the resulting product has its own personality and place in the industry. But before evaluating the workflow and functionality of Lightroom, let me mention a few things Lightroom is not.

Many forum contributors requested a digital asset manager (DAM) from Lightroom. In general, they seem to think that a DAM is a light table, metadata labeler and full-featured storage manager. Lightroom does provide a useful repository for storing shoots and collections and defining stacks. It adds myriad ways to attach metadata and has a grid view that can be used for sorting and defining.

A sophisticated DAM it is not; it is a professional photographer's tool that is many steps better than iPhoto and Album. It does recognize attached cameras and card readers and provides a number of approaches to importing images from these sources. For this reason, it competes against standalone single-user DAMs such as Portfolio and Cumulus.

DAM solutions for workgroups and enterprises offer a lot more as data managers and workflow components, and Lightroom does not pretend to contend in that arena. It doesn't have the workflow automation, file security, archiving or soft-proofing functionality to compete against full-featured DAM systems. Version 1.0 has enough DAM to make Lightroom a reasonable day-to-day repository for all images.

Workflow considerations. Some workflow functions can assist users who are making the transition to Lightroom from another database. First of all, beta users who relied on early versions of the application for daily work will be happy that installing the release version will update the Lightroom image database. Second, the



Illustration 1. New Metadata menu in Lightroom Version 1.0. The entire menu was missing in beta copies and only appeared in the release version.

Windows version includes an Import from (Adobe) Album. Third, Lightroom and Photoshop interoperate relatively seamlessly. Images can be sent to Photoshop for editing as a copy, and any changes to this copy are recognized back in Lightroom. Fourth, it is easy to set up a watch folder for automating new additions from outside of Lightroom or from images dragged out of an application such as Portfolio and into Lightroom folders. The Lightroom repository itself can reside on a local or external drive.

File formats. File format support is also an important consideration. Originally, the beta versions were very Adobe Camera Raw-centered. The ACR engine from Photoshop was added to Lightroom, and importing a Raw file invoked the ACR interface. The expectation was that files would be manipulated in ACR and saved as copies to DNG, JPEG or TIFF. The release version opens up the manipulation to these other formats, too. This makes sense since while Raw is gaining favor among photographers and prosumers, most photographers — especially action photographers — still use JPEG as their main format. Changes made to Raw files continue to be non-destructive, with the description of the changes saved to a meta-data sidecar file.

GUI. The user interface was the other major discussion topic in the forums. In Photoshop, we know that even with a handful of ways to achieve the same outcome, access to functions and features is not always obvious. With Lightroom Adobe had the opportunity to start from scratch or follow the look and feel of Photoshop and other applications in the Creative Suite. It chose to go in a different direction and although one can sense a hint of copying the

Each of these modes are comprehensive enough that for most photographers Photoshop is unnecessary.

white on black used in the Aperture user interface, there is also a link to the user configurability that has become part of the evolution of Creative Suite applications. It also seems that every menu operation is available in a right-click contextual menu, including the color of the background surrounding the images. Panel fonts can be large or small. A cursor hovering over a numerical readout next to a slider turns into a slider itself while double-clicking on the readout allows for direct data entry.

Another new form of interactivity comes with the Histogram that sits in the upper-right panel. Numerical parameters are great, but many (if not most) photographers and graphic artists are more comfortable watching the changes made to their images dynamically. With the introduction of Lightroom 1.0 it is now possible to click and drag the cursor over the

Histogram and make changes to the selected image. If the changes are worth saving, fine; if not, simply Undo or Reset (the button at the bottom of the panel). All changes made to the Histogram or any of the sliders are tracked in the History panel (in Develop mode) and can be reset to an earlier state.

Defining presets. To configure a preset for printing, Web gallery template or slideshow, simply delete the supplied set and add your own, based on the current parameters. Many areas also feature cycling. This means that when you click on a plain keyboard key or F-key, the grid or information overlay will cycle through the available settings. All presets for all panels can be reset through a button in the Preferences window.

Metadata. I was a bit frustrated by the metadata support in the early betas. First of all, metadata was being associated with the non-destructive changes made to the Raw images, not to file characterization. The File Info approach being defined and refined in Creative Suite was not available in LR1, which didn't make sense. If LR1 is to become the gateway for images entering a content-creation workflow, this is the most important time to begin the labeling process — not necessarily the entire process of labeling, but at least the bare essentials so data doesn't get lost and vital specifics from a shoot are captured close to the time they took place.

With the introduction of LR1, I was pleasantly surprised. Metadata now has its own menu and there are a few ways to embed tags in files — certainly enough to satisfy the casual keyworder and the more diligent IPTC meta-tagger. Some automation is possible, and once again preset collections of metadata values can be input and embedded into images. This built-out metadata capability trumps even the low-end DAM systems' anemic ability to add custom fields. (Illus.1)

Unfortunately, metadata is a complex topic that even this more comprehensive functional approach does not solve. See my earlier article on Taxonomies (TSR, Vol. 5, No. 16, November 2005) for an indication of the issues surrounding management and the use of taxonomies and controlled vocabularies.

Adobe Brings Light to the Darkroom

One of the chief distinguishing features of LR1 is its implied workflow. The application is broken up into five distinct modes: Library, Develop, Slideshow, Print and Web. Moving from one to the other invokes new menus, contextual menus, presets and panels. Some appropriate links to other modes are included in the menus, such as Go to Grid (in Library from Web module) or Go to Cropping (in Develop). The transition from one mode to another is not jarring, however. The key modes for photographers are obviously Library, Develop and Print. Each of these modes are comprehensive enough that for most photographers Photoshop is unnecessary.

Slideshow and Web are somewhat useful and welcome, at least insofar as they haven't taken any geography or functional bandwidth from other, more important Lightroom modes. System requirements are modest. My review was done on two laptops: a 1GB RAM, 1.33 MHz PowerPC, Powerbook 17-inch and an Alienware 1 GB RAM, 1.83 MHz Pentium. While the performance was snappy and way beyond the performance we experienced during the betas, I suffered from a lack of screen space. A 20-inch or 23-inch screen would have been very nice.

Library Mode

The first Lightroom mode is Library, where images are imported from cameras, card readers or other applications. Preferences are the first settings that have a bearing on Library mode. This is where some of the interface standards are set and, more critically, where most of the important file management and archiving decisions are defined.

The External Editors tab in Preferences identifies defaults for file format, bit depth and color space in external editors such as Photoshop. In the past, most images had to be downgraded to 8 bit to be adjusted or altered with filters in Photoshop. With CS3, most of the actions used to manipulate 8 bit will be available to manipulate 16 bit. In general, it's considered good practice to make changes at the highest bit depth and resolution before converting to a lower one for printing. In the future, printers might also take advantage of the larger ProPhoto RGB color space.

Organizing in Library. Images imported into LR1 can be sorted using Collections, Quick Collections, Folders and Stacks. During the beta period, one of the most requested features of LR1 was stacking. The Stacking feature, which is evidently popular in Aperture, is available through contextual menus for associating similar images. If you have a preference among the items in a stack, you can pop it to the top. Collections are ad hoc groups of images that exist outside the folder hierarchy. A collection can be used as the basis for a slideshow or a Web gallery. Collections are persistent and remain after the application is closed down. Quick Collections are not persistent nor are they intended to be used in the same way. In some cases a single image can be duplicated, sort of as a snapshot. LR1 allows for creating a Virtual Copy that can be worked on a degree separated from even the metadata instructions that would normally be associated with a Raw image or DNG.

Compatibility. Lightroom is compatible with Photoshop native (PSD), Tagged Image File Format (TIFF), JPEG and 150 native Raw file formats from digital cameras. If the computer can read the SD or CF card, or if the camera can be mounted, the application will probably recognize the files on it. LR1 is essentially an



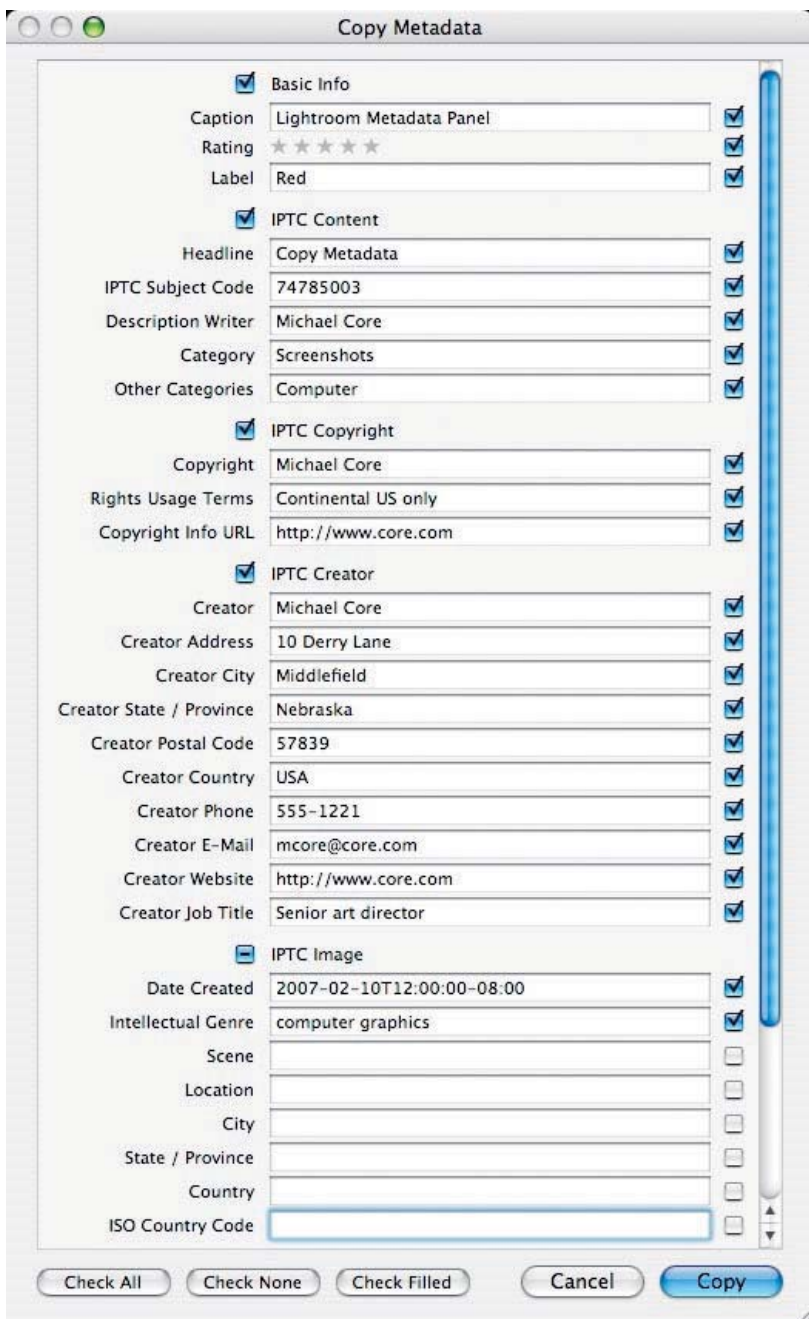
RGB application, and CMYK is not recognized either as read-only or for processing. Although this subject arose in the user forums, it evidently did not make the cut for functionality. Support is available for Adobe RGB 1998 (recommended for 8-bit images), sRGB (recommended for Web viewing) and ProPhoto RGB (recommended for high-quality image manipulation on 16-bit images).

Metadata in Library. As mentioned earlier, metadata can be embedded in files in a number of ways. Over the years, many users relied on stuffing all of their keywords into the keyword field. LR1 provides a handful of ways to manage keywords (though not schema; we'll discuss schema next). For keywords the options are **Photo > Change Keywords (in Library mode)**; **Photo > Set Keyword > opens a predefined metadata template**; **Metadata > Keyword Set > Edit (to build a**

Illus. 2. Edit Keyword Set allows you to build unique keywords in a set without having to delimit the words with commas, spaces, tabs, etc.



Illus. 3 A view of part of the main metadata panel in Library and the popup identifying all of the metadata schema built into Lightroom 1.0.



Illus. 4. Metadata > Copy metadata ... window for copying and pasting metadata between selected images in Lightroom's Develop mode.

bigger collection of simple keywords) (Illus. 2); **Import and Export Keywords from machine to machine;** and **Purge Keywords not being used by files.**

Keywords can be organized into sets (Illus. 2). A few suggestions are provided to start out and any field can be modified.

Metadata templates. For those of us accustomed to Bridge's approach to defining presets for metadata, LR1 is a bit different. The **Metadata > Copy metadata...** window displays a form similar to what is expected in a metadata template. On this form, fields can be toggled on or off, depending on what metadata must be captured. The fields can be edited or used to copy metadata already embedded in a file. Each form can then be used to paste the metadata into one or more selected images in LR1. Strangely, it's not

possible to save a form as a preset. It's designed to work on currently selected images. (Illus. 4)

Lightroom supports the camera-supplied EXIF metadata, IPTC core and the simple keywording mentioned above. It also supports editing the creation date as a menu item.

Develop Mode

Library mode is the gateway for organizing images and attaching metadata to them. It includes sorting, image comparison and a small set of development tools called Quick Develop, where you can change white balance, exposure and vibrance. According to Adobe, vibrance adjusts the saturation so that clipping is minimized as colors approach full saturation. Vibrance also prevents skin tones from becoming oversaturated. Saturation adjusts the saturation of all image colors equally, from 100 (monochrome) to +100 (double the saturation).

These are useful tools for deciding which images stay and which are deleted. Cropping, alignment and red eye are in Develop Mode — the true digital darkroom — rather than Library mode.

All of the color level controls, sharpness and noise reduction are available, plus a comprehensive set of tools for dealing with camera and lens issues. For example, vignetting, which is occasionally found on full-frame digital cameras with wide-angle lenses, can exhibit dark areas in the corners of the image. The Vignette slider can progressively remove this darkness without requiring wholesale cropping of the image. Chromatic aberration and noise in high-ISO, low-light shooting can be dealt with as well. Sharpness can be controlled in Develop or just before output in Print to compensate for the softness seen on scaled-up images on inkjet printers. All the changes made in Develop can be saved as a preset and applied to one or more images in the grid.

History panel. Every change made to an image in Develop Mode is recorded in the History panel. This welcome carryover from Photoshop provides a way to review the operations on an image and revert back to a previous state without damaging the image. Not only is it a good opportunity to double-check the settings used, but it saves undoing changes or setting up before and after side-by-side images for comparison. It's a much quicker on-the-fly approach to "what if" image manipulation.

Healing tool. Two of the most requested Photoshop tools in the beta test were the cloning and healing tools. In Lightroom Develop mode, Cloning is used to apply the sampled area of the photo to the selected area. Healing matches the texture, lighting and shading of the sampled area to the selected area. Both take a little getting used to. The operation is new for Lightroom and involves a click to select and, with the mouse button held down, a drag to the new area to copy. Once in position, the original and new spots can be dragged

into new positions. A slider determines the size of the spot. Both worked flawlessly.

Print Mode

Print mode is a critical area for photographers and one that Lightroom needs to get right if it is to be regarded as a reliable content creation tool that can live outside Photoshop, InDesign and QuarkXPress. Besides art prints, proof sheets and drafts of full-size images will be made and must exhibit expected results. As someone who relies on Photoshop's Print Preview window as a primary starting point for determining output settings, I can attest to the simplicity of switching over to Lightroom's Print environment. Page Setup has its own button, margins can be set by sliders and the expected Color Management options of Profile and Rendering Intent are available. So, too, is Print Sharpening, which is a way to compensate for inkjet softness. A lot of additional controls support proofing and archiving. File information and user identification can be added, along with crop marks, slugs, etc. So far, the output I've gotten matches that of Photoshop in Creative Suite2.

Slide Show and Web

Slideshow mode. I expect that some people might consider that the value of Lightroom has been compromised by the addition of Slideshow and Web. But Slideshow is no PowerPoint and doesn't pretend to be; it's a quick way to show a set of slides without the tools and panels for review or exhibit. Captions can be added and fonts changed. Metadata can also be used as a source for caption material.

Web mode. While Slideshow is an easy way to exhibit images, Lightroom's Web mode provides photographers with a more useful approach to adding galleries to a Web site. A selection of Flash and HTML templates are provided, including types of metadata and possible caption examples. The user adds comments or selects the metadata to be displayed, chooses a template and fills out the necessary path, password and domain information to automatically upload and keep synchronized with a personal or business Web site. An alternate view of this type of template shows a grid of thumbnails. The user can create individual galleries for different subjects or make one comprehensive gallery for all images. Each time synchronization takes place, only the images not in the Web folder are added. Being able to export as HTML or Flash opens many possibilities for Web design. One may use a gallery as a page or nested in a table and use the HTML as the starting point for page design.

Conclusion

I expect that one outcome of the release of Lightroom will be that photographers will no longer have to preface their digital darkroom experience with, "I use Photoshop but use very little of it; I need to spend more time learning

about it." Understanding the art and practice of photography is difficult enough without adding the knowledge of color science and photo-realistic image creation.

With Lightroom 1.0 there is no need for photographers to own Photoshop. Does that mean there's no room for improvement? Unfortunately, no. A lot of software provided by camera makers do things Lightroom is "not allowed to do." Information captured by the sensor is not available to Photoshop. In some cases, users even say they like one or another function provided in software from a camera manufacturer over a comparable function in Photoshop.

Then there's tethering, which is when the camera is connected to the computer during a shoot. Driver information to allow that interface is proprietary to the camera maker, which means that Lightroom (or Photoshop) cannot interact with the camera. In an ideal, interoperable world, Lightroom presets could be downloaded to the camera as custom settings. This might not be important for a casual shooter, but for the professional photographer with thousands of images to manage — the target market for this software — it could make a world of difference in post-processing.

It would be nice if all output controls could be managed from Print Mode. Using the operating system Print function leaves open the possibility of introducing errors into the process. I believe this is not possible because of Apple and Microsoft's lack of access to these functions.

It will be interesting to see how the approaches Adobe has taken with regard to metadata will be received. Since the menu didn't exist in any previous beta iteration, there has been little discussion among testers about it. My guess is that the only issue that will be a true deal breaker in daily use is if metadata coming from or going to any of the other Creative Suite applications is not managed consistently.

I would also like to see a little more care taken with storage and archiving. There are controls in a variety of dialog boxes for routing files, but establishing an official link to Bridge and Version Cue would make more sense. It would provide developers with a programming interface to link to their DAM system and would allow individual users to take a dashboard approach to identifying locations to deposit imports, exports, copies and temporary work in progress.

Providing better file management and adding a universal search palette based on metadata might be just enough repository for most users. With Creative Suite 3 arriving soon, interoperability issues between Lightroom and Photoshop, as well as links between Lightroom and Bridge/Version Cue, might change dramatically.

Lightroom Version 1.0 is available now for an introductory price of \$199 (MSRP is \$299). An educational version is available for \$99. **TSR**

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Adobe Takes PDF to ISO and Takes Off To Mars

BY JAN ESKILDSEN

The emerging battle over formats from different developers should also be seen as a fight for the future of publishing, where all players must be able to exchange data for cross-media publishing, including variable data for Web and print. Everybody's talking XML, the de facto lingua franca. But which kind of XML?

Graphic arts professionals and others working with publishing across different media and platforms should study what's happening in the file format market very carefully and should closely follow developments over the coming months.

In 2006, a couple of new standards emerged in the software industry. The International Organization for Standardization (ISO) published a declaration approving the XML-based document format Open Document Format (ODF) as an ISO standard. The format specifications are developed and maintained by a working group comprised of Adobe, Corel, IBM, Intel, Novell and Sun.

There's also OpenOffice, an office suite and developer platform that can form the basis for developing new applications. Using this software, a user can create applications that can be saved in Open Document Format.

The European standards organization Ecma also announced that it has approved Office OpenXML and said it would begin preparing for the work that can make Open XML an ISO standard. This would insure that Office documents can be read in the future and would make exchanging documents easier.

Microsoft Vista and XPS

Microsoft has the same plan for its new document and print format XPS (XML Paper Specification), but so far it hasn't said when this work will begin or which organization it plans to work with in the process.

On Jan. 29, Adobe Systems announced in a press release titled "AIIM to Facilitate ISO Standards Process for Leading Electronic Document Format" that it intends to release the full Portable Document Format (PDF) 1.7 specification to AIIM, the Enterprise Content Management Association, for the purpose of publication by ISO.

That same day, Global Graphics revealed that its plans to launch a next-generation OEM document platform this year are well under way. "The two pillars of the integrated platform are new RIP solutions optimized for the full range of printing devices and a powerful electronic document library offering file format conversion, creation, display and manipulation capability for a wide variety of applications," Global Graphics said. Its next RIP will, among other things, be able to interpret PostScript, PDF, XPS and PCL.

If this is not confusing enough, we've been told that the cornerstone for building user interfaces in Windows Vista is the new XAML (pronounced *zammel*), an XML-based markup language that works with Windows Presentation Foundation, Vista's new graphics subsystem.

For some time Microsoft has been promoting its own image standard, HD Photo (formerly known as Windows Media Photo), for continuous tone. On microsoft.com you'll find more than 1,000 links to HD Photo. "Our ultimate goal is that it does become the de facto standard people are using for digital photos," Josh Weisberg, Microsoft's director of digital imaging evangelism, told news.com.

According to Microsoft, HD Photo supports a wide range of features, including multiple color formats for display or print, fixed or floating point

During his visit to Copenhagen, James King visited the sculpture of Hans Christian Andersen, one of the best-known and most translated authors of the world. Was he looking to the past to try to get a glimpse into the future?



high-dynamic range wide gamut image encoding, lossless or high-quality lossy compression, extremely efficient decoding for multiple resolutions and subregions, and minimal overhead for format conversion or transformations during decoding.

“HD Photo delivers a lightweight, high-performance algorithm with a small memory footprint that enables practical, in-device encoding and decoding. HD Photo delivers image quality that’s comparable to JPEG-2000 and more than twice the quality of JPEG,” according to Microsoft.com (look for HD Photo Specification Download).

Then there’s Microsoft Expression, a new application suite comprised of Expression Web, Expression Blend, Expression Design and Expression Media. Microsoft will obviously try to penetrate the office market with applications that for some jobs could be an alternative to the more advanced and costlier software packages traditionally used in graphic arts.

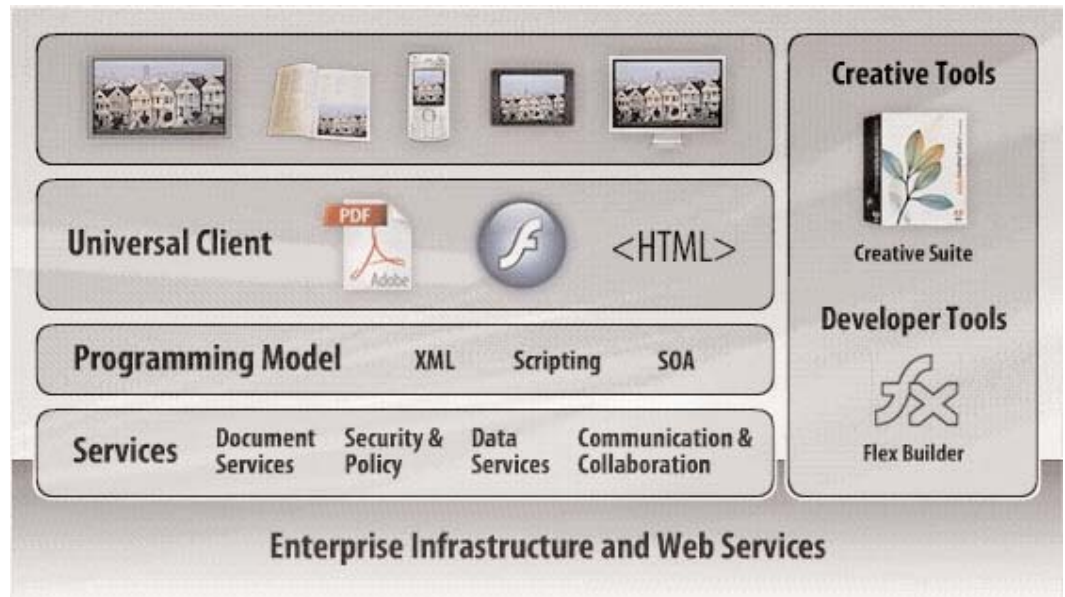
Since millions of people all over the world use Microsoft Office, other developers and companies watch what Microsoft does carefully, partly to protect open standards and partly because the applications they develop have to interact with Microsoft’s. That’s why Corel and Novell have announced their support of Open XML in OpenOffice and WordPerfect, respectively. The Open XML-formats can be used on Windows as well as Linux platforms.

More Than Just XML

We met with Adobe Systems principal scientist and PDF Platform Architect Dr. James (Jim) King on a winter day in Copenhagen.

“XML isn’t just XML,” King said. You can’t just take an XML file and use it for whatever you want without any sort of customizing. In itself, XML isn’t a markup language, which is evident in the word Extensible (i.e. stretchable or expandable) Markup Language. XML is a standardized way of creating markup languages, meaning that several XML-based markup languages can exist side by side, he said.

King also said you can have XML for business cards, other standard XML markup languages and XHTML, which is XML for HTML. “Inside Adobe, I have therefore said for some years that you just



can’t say XML only. ... You have to say XML for ... HTML, or XHTML, XML for floating text or for statistical presentation of text and graphics, XML for SVG or for XPS.”

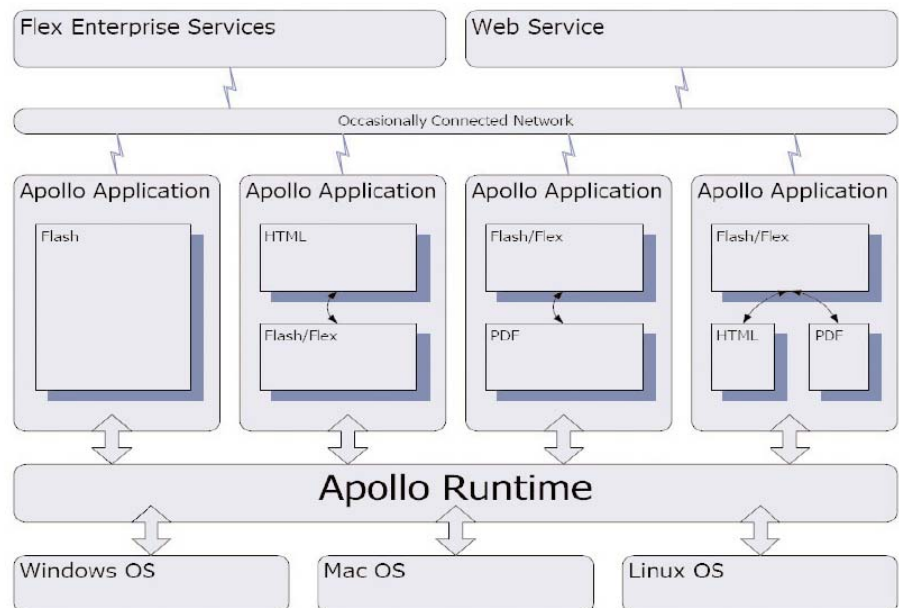
There are so many possibilities for using XML that we have to clarify what we are talking about if we don’t want to confuse each other, said King. We can have markup languages that are not XML-based and we can have XML-based markup languages. The name HTML (HyperText Markup Language) indicates that it’s a markup language.

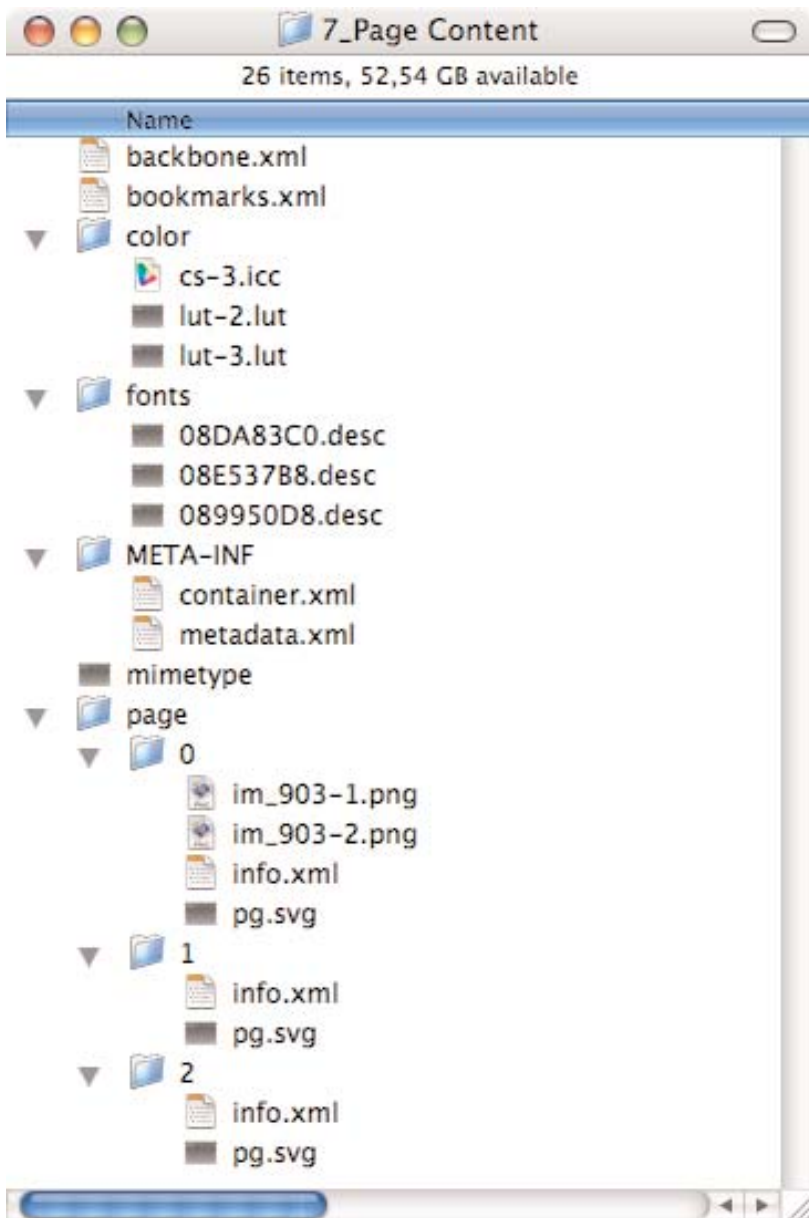
If you follow the XML standard, you get very well-defined and well-documented rules, widespread tools for all, widespread knowledge and understanding, and not the least, selective search for words in each amount of text, King added. Among the XML markup languages are:

- SVG: XML for Scalable Vector Graphics
- OEB: XML for Open Electronic Books

Engagement Platform is Adobe’s new buzzword for its platform to produce Web sites, rich Internet applications, electronic documents, interactive media and publications.

Apollo is more than meets the eye in a spaceship. The goal is to allow users to work with Internet applications while their desktop computer is offline.





This is the file structure in an Adobe "Mars" PDF. It's obvious that color profiles, metadata, the structure's backbone, fonts and content are separated in independent, open-file formats that are compiled by Acrobat as a PDF. This is a revolution in the PDF-World.

- JDF: XML for Job Definition Format (print)
- XSL: XML for Extensible Stylesheet Language
- NewsML: xml for News Stories

Then there's XHTML, one of many XML-based markup languages, King said. (You can search for other applications and names at www.xml.org).

Therefore, said King, you need to be specific when you're talking about XML. Is it XML for business cards, XML for HTML (XHTML), XML for print jobs (job definition format, or JDF), XML for scalable vector graphics (SVG) or XML for structure, XML for floating presentation (XHTML) or XML for final presentation.

PDF and XPS

PDF can be seen as a means of capturing digitally what's transmitted to a printed page or screen. It could be multiple-page documents, where you can save precise and complete information about each object, its position, color, typeface, etc.

PDF is system-independent and can be used and reused for print, screen, film, printing plates, etc. You can capture the final result of all formatting or layout processes in a PDF file and use it during interactive formatting, where hours are spent fine-tuning the document so that the result ends up being exactly what was intended, added King. "But we also want to watch and read the same file on a portable computer, a PDA, an e-book reader and a mobile phone — you name it," he said.

"PDF began as a presentation and exchange format that could show what you wanted to print, but people want more from PDF. They want pages that can be reused, which is why we have made it possible to let the text be 'floating,' so it can be reused in other layouts. And that's why we have created the possibility for extracting XML from PDF," said King.

Whither Microsoft?

"To be honest," King said, "I don't know what the development of XPS is all about or why Microsoft has chosen to go for it. Many others have chosen to go with PDF. Apple has chosen PDF as its format in the Macintosh platform and Microsoft could have chosen an equivalent solution. They do that partly now, even if the PDF and XPS functions are not integrated in the operating system from the beginning, but has to be downloaded."

One of Microsoft's stated goals is to make what you see on the screen more like what you get from your printer, said King, and Microsoft has emphasized that its new Vista operating system will have increased potential for color management. While it is co-developing its new document format with Global Graphics, Microsoft is developing its new Vista color management system with Canon.

Code Name Mars

King said Adobe has been busy since the acquisition of Macromedia in April 2005. "The development of new technologies goes on at full speed, and you can get familiar with some of them at our Web site, labs.adobe.com. Some of the newest technologies are Mars and Apollo, two different projects, each pointing to the future in its own way," he said.

The Mars project enables an XML-friendly presentation of PDF documents, King said. PDF is already an open specification and the trusted global standard for high-fidelity electronic documentation. The Mars project was started to research how XML and other standards can be used so that developers can better integrate a PDF file into existing applications and solutions, he said.

The Mars file format not only incorporates PDF but also the standards SVG, PNG, JPG, JPG2000, OpenType, Xpath and XML in a Zip-based document container; in other words, it's a Zip file. You can unzip a Mars file if you change its name to .zip.

Two Mars plug-ins enable recognition of the Mars file format by Adobe Acrobat 8 and Adobe Reader 8 software, and graphic arts professionals and others using Acrobat Professional 8 will be able to create PDF files from XPS, King said.

Mars vs. XPS

Some might see Mars as Adobe's answer to Microsoft XPS. The PDF format is the basis for print, but in the digital future the content of many PDF files will never meet paper and will exist only in computers and on the Internet.

This is the underlying philosophy behind Microsoft's plans for the digitized future of which XPS and WPF/E (Windows Presentation Foundation/Everywhere) are a part. Documents will be created digitally and stay that way, and might never be printed, so Microsoft's promotion of XPS (XML Paper Specification) as a technology to improve print is only part of the picture.

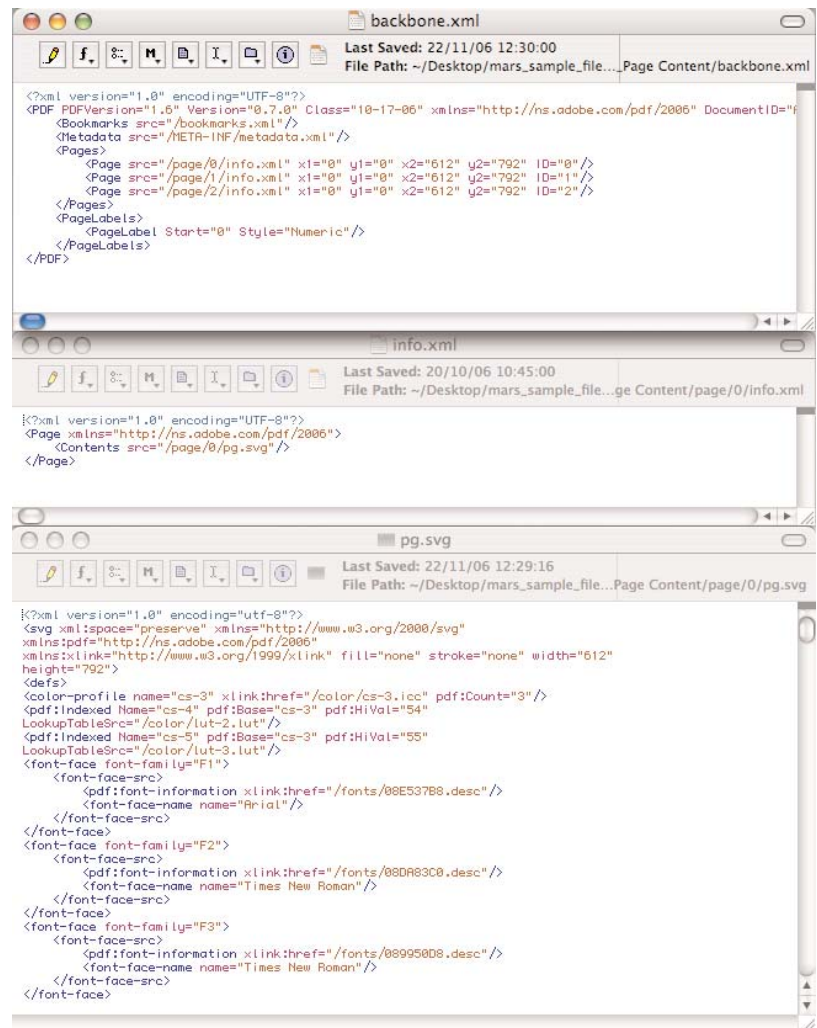
At businesses that have installed Microsoft Sharepoint Server, everybody connected to the server will be able to do free text searches of all of their own and their colleagues' documents. If you want a document printed in another office by a colleague who may or may not have Windows Vista (or Windows XP), it can be saved as either PDF or XPS, mailed and printed.

Depending on the document format, the recipient will be able to open the document with either Adobe

XML is applied to a wide variety of applications throughout the printing and publishing industry. Some (but by no means all) of the applications include:

- **Open eBook Publication Structure (OEBPS)**, maintained by the International Digital Publishing Forum (www.idpf.org)
- **News Markup Language (NewsML)**, maintained by the International Press Communications Council (www.iptc.org)
- **Information Content and Exchange (ICE)**, (www.icestandard.org)
- **Publishing Requirements for Industry Standard Metadata (PRISM)**, an IDEAlliance initiative (www.prismstandard.org)
- **Specifications for Publisher & Agency Communications Exchange XML (SPACE/XML)**, also under IDEAlliance (www.idealliance.org/spacexml)
- **Scalable Vector Graphics (SVG)**
- **Extensible Stylesheet Language (XSL)**
- **Extensible Hypertext Markup Language (XHTML)**
- **Job Definition Format (JDF)**, the print production automation and job ticket specification maintained by CIP4 (www.cip4.org)

Other applications for printing and publishing, and many other industries, can be found at www.xml.org. **TSR**



Reader or Microsoft XPS Viewer and print it, King said. Acrobat already supports XML workflows, but Mars expands this further, taking the possibilities for indexing and metadata beyond what PDF can do today. Mars also will support better vector-based graphic formats than PDF does.

As open XML and XPS, the format's different parts can be separated as a Zip file, making it easier to extract XML from the file. "We expect that existing or new tools will be able to do faster text search in the files," said King.

It's too early to predict how Mars will fit into the ISO scenario, but in the end we might see XML as dominant part of PDF and XML might become a substitute for PostScript, King said.

The Many Faces of Apollo

Apollo is Adobe's code name for another new technology: a runtime edition of a cross-operating system that will enable developers to make better use of their skills in developing for the Web. Apollo can be seen as an umbrella for Flash, Flex, HTML, JavaScript and Ajax, and it will allow the user to build and take rich Internet applications to the desktop.

Three windows: The content of the backbone file in Adobe "Mars" PDF (top). Each page has a separate reference to an info.xml (middle window), which again points to the layout and content files (in this case, SVG in the bottom window).

Useful Links

- 1 Read about Apollo and Mars: <http://labs.adobe.com>
- 2 Read about eBay and Apollo: <http://blogs.zdnet.com/Stewart/?p=197>
- 3 Read about XPS here: www.microsoft.com/xps
- 4 Read about Microsoft Expression here: <http://www.microsoft.com/products/expressio/>
- 5 Read about XPS RIPs: www.globalgraphics.com

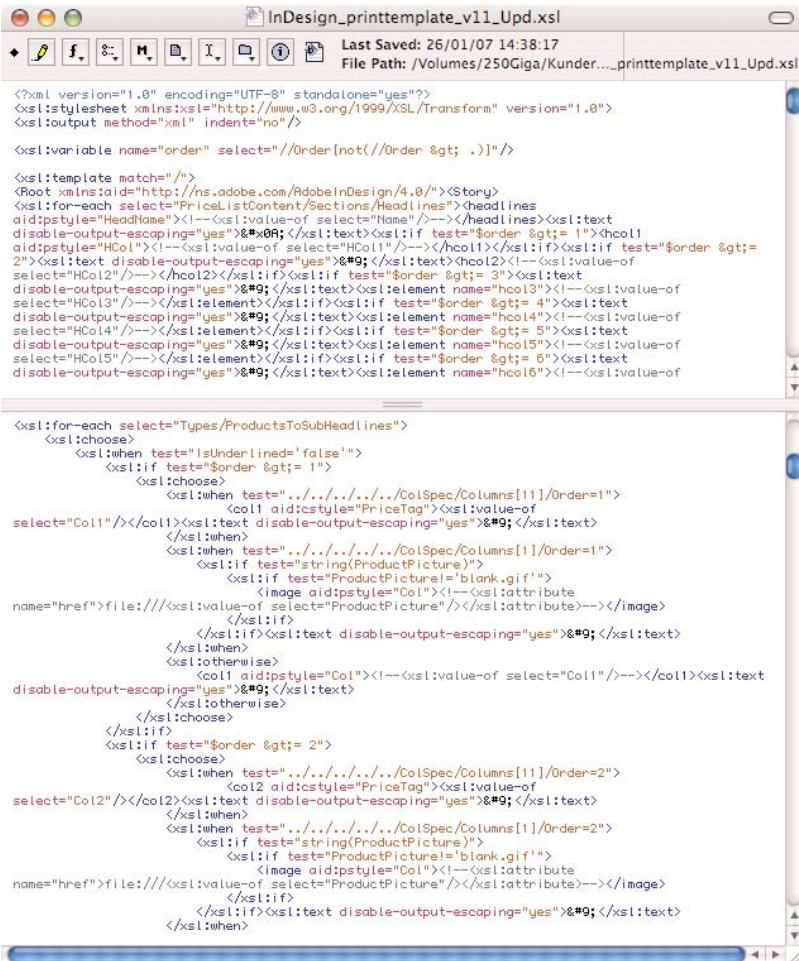
Some people have misunderstood Apollo, describing it as a Flash player, King said. A Flash player makes it possible to develop true cross-platform applications, games and animation for the Web without changing code. But Apollo is not just Flash; it's a programming frame, which contains more than a Flash player. It enables programming for different operating systems, such as Mac OSX, Windows and Linux, and with Apollo you can write an application and publish it on all three platforms simultaneously, he said.

It's based on Flash player and Actionscript but will also support PDF and HTML. It will be possible to develop rich Internet applications that give an "in-browser experience" of Flash in a client such as Acrobat Reader. King said he expects Apollo 1.0 to be available before the end of the summer.

One company that has begun to explore the opportunities in Apollo is the trade portal eBay. Whereas Amazon has its S3 (Simple Storage Service) storage system, eBay has experimented with different technologies for making it easier to buy and sell goods on its site. One such project, called San Dimas, will give the user many new opportunities for working with eBay while the computer is offline.

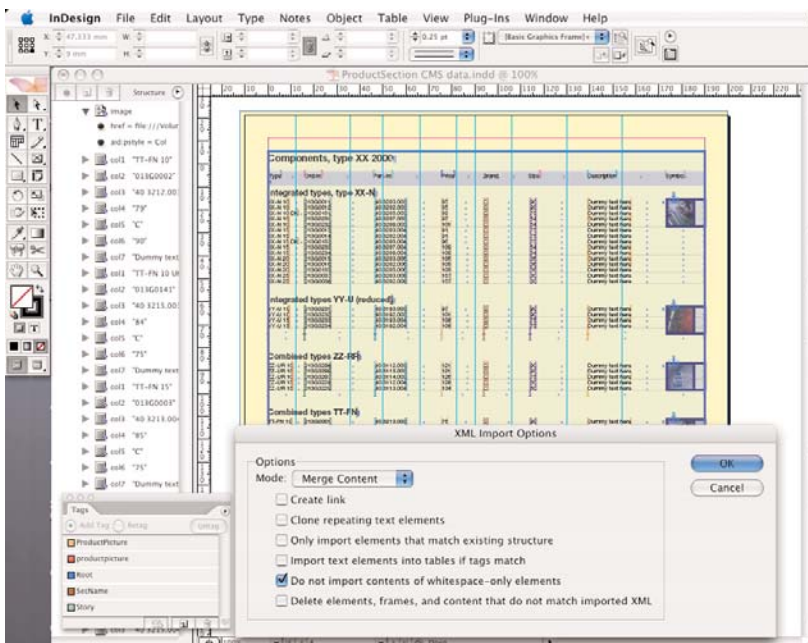
What's Going On?

Behind the scenes, Adobe and Microsoft have discussed the integration of "Save as ..." functions in Windows Vista, said King. This was not only because you can save all documents from Office 2007 and the new versions of Publisher and Visio as PDF or XPS, but also because you can save all of the visual stuff on screen in Vista as XPS as well. This means that if you're running Adobe InDesign and Photoshop in Windows Vista, you can save your finished documents as XPS and print them on your color printer with better results than with Windows XP. "We don't say it will be better than with PDF," said King, "but when you get a new portable file format for free, some companies might begin to think."



From Content Management System to advanced rules-based pagination in Adobe InDesign. The raw XML content comes from a CMS and is transformed with this XSLT stylesheet to predefined InDesign templates.

XML imported in Adobe InDesign from a content management system. By using "Do not import contents of whitespace-only elements," InDesign can update parts of a complete XML, allowing you to implement partial solutions for updating of data.



Some people might want to buy their software from a single vendor, such as Microsoft, while others will stick with Adobe for creating PDFs. Some companies might be looking to save money — “Let’s get free of Adobe Acrobat” — while others will ask their offset printer to print their XPS files, said King. On the other hand, PDF is stable, widespread and is used in so many applications that it seems unlikely that it will be replaced by anything else in the foreseeable future.

Conclusion

Wherever you are in the graphic arts food chain, you should keep a close eye on the software market over the coming months. Adobe will release its new Creative Suite 3, as well as Apollo and Mars (probably with other names) before the end of summer. Microsoft has already launched its new operating system, Windows Vista, which will soon be followed by Office 2007 and its new four-application Expression suite, to be followed by new XPS-RIPping products from Global Graphics (creator of the Harlequin RIP). The OpenSource environment has been growing, and PDF-files can be generated there, too. Finally, we see the growth of alternative Internet browsers.

How will business and graphic arts users react to XPS? We expect that at least initially, XPS will create confusion if Office 2007 users ask printers to print documents using it. The printer can convert XPS with Acrobat 8 Pro, but more likely will ask for a PDF file made to well-known standards such as PDF/X and PDF/A.

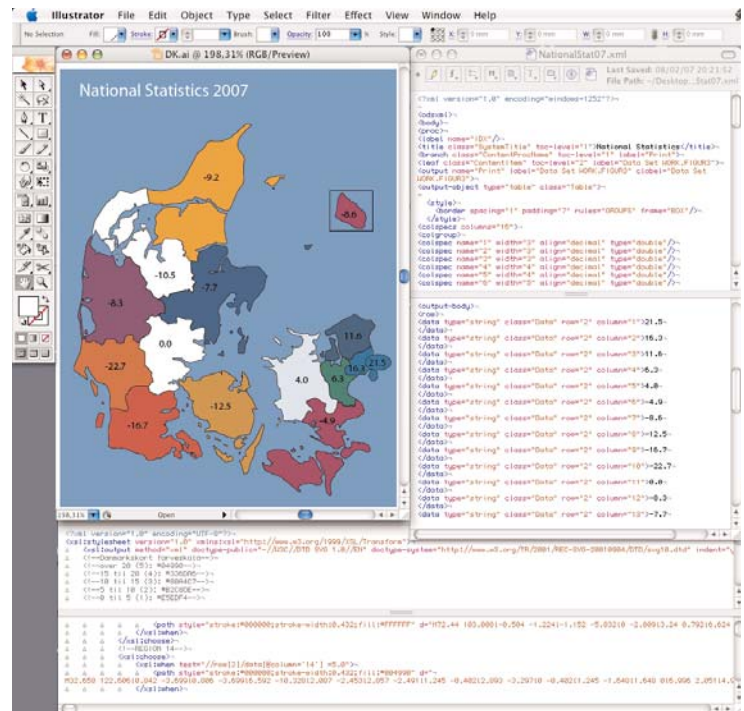
Many printers are accustomed to customers’ expectations when they bring in a document from a Windows application: “If I can print this on the color printer in my company, you must be able to print it.” As we know, it’s not that simple. Time will tell if an XPS RIP becomes a necessity (printers are not eager to invest in new RIPs).

Adobe announced its RIP’s newest core PDF Print Engine at IpeX last spring, but it will take some time before it’s incorporated into new RIPs from known vendors — some printers haven’t upgraded their RIPs in ages. Within a year, Global Graphics RIP for PDF, XPS and PDL will be available. And Adobe might still come up with new products or projects we haven’t even heard about yet.

Apache.org has a new version of the Open Source XSL-FO processor FOP, so while Microsoft and Adobe fight for attention in page building with XML, there’s a third player in the market using a W3C-standard — something that should not be underestimated in this race.

We shouldn’t forget that XSL-FO shares stylesheet formatting with CSS, which is adopted by the whole Web world. It’s possible that neither Adobe nor Microsoft will end up controlling page description in the future.

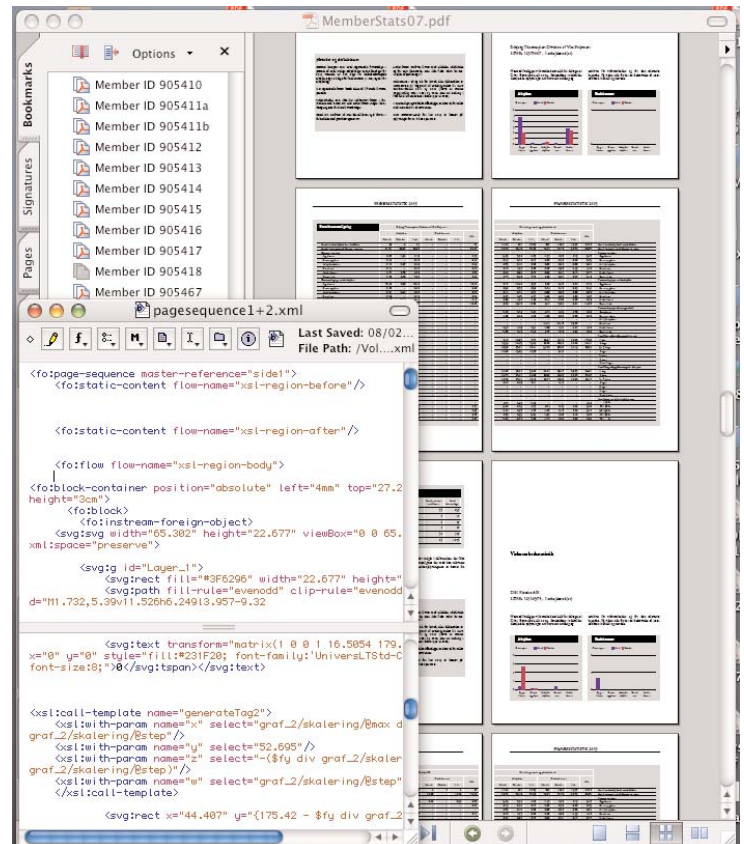
TSR



SVG with variable data. Statistical figures from an SAS Institute system are transformed with the help of XSLT directly to SVG on the basis on an Adobe Illustrator template. The figures in the vector objects come in “live” and changes color category automatically.

XSL-FO

XML data from a statistics system are merged directly with the help of XSLT into an XSL-FO template and creates multipage PDF files on the fly. Notice the variable data in the graphs (SVG) and automatic insertion of a bookmark to the left.



JDF Progress Report

BY MICHAEL MITTELHAUS

At a recent meeting of the CIP4 organization, significant progress was made on the next version (1.4) of the Job Definition Format. Michael Mittelhaus, the only journalist in attendance, filed this report.

At one of its two annual membership meetings, held at last year's Ipex, the CIP4 group¹, chaired by Global Graphics CEO Martin Bailey, largely focused on the upcoming Version 1.4 of the JDF specification, as well as on resolving some issues in Version 1.3. As the only journalist in attendance, I found that the meeting shed some interesting light on JDF and on automation in general.

In April 2006, CIP4 had 302 members, including 14 partner members (the highest level of involvement). This total has not changed significantly since then, with the current total at 308. CIP4's Financial Officer Marc van Vught (Screen) reported that the group at one point had 45 new members during a single year, but membership levels have leveled off recently.

After the meeting, Bailey announced that he will be stepping down as the organization's CEO to assume a greater role as Global Graphics' chief software developer. Margaret Motamed (EFI) was elected as the new CEO and Mark Wilton (Kodak) was elected to replace Motamed as education & marketing officer. Jim Harvey (Media4TheWorld) will continue as executive director and Rainer Prosi (Heidelberg) will remain as technical officer.

Version 1.4 on the way

Even though JDF Version 1.3 was published on Sept. 30, 2005, applications using this version had just started to emerge during last year's Ipex. Even today, not all applications have implemented the latest version of JDF. As a result, users planning to adopt JDF should take care, asking their vendors which version they are using and seeking their guidance for proceeding to the latest version.

¹ The International Cooperation for the Integration of Processes in Prepress, Press and Postpress (CIP4) organization (www.cip4.org) is the standards body responsible for maintaining and developing the Job Definition Format, an XML-based print production workflow and interface description.

² The XML-based Job Messaging Format (JMF) is the language used to communicate information between JDF agents and controllers. JMF is an integral part of the overall JDF specification.

³ www.printtools.org/publications/jdfhandbook.php

⁴ JDF product certification is currently managed, for a fee, by PIA/GATF (www.gain.net).

Basic Definitions

JDF is popularly referred to as a "Job Ticket" technology, providing a common framework for production metadata among diverse applications and manufacturers. In fact, it is more than that. Although the standard builds on earlier work, including the CIP3 Print Production Format (PPF) specification and Adobe's Portable Job Ticket (PJTF), the new format not only provides information but enables integration of production tasks.



The JDF standard encompasses job messaging format (JMF), which transcends the job ticket metaphor. Taken as a whole, the format is a print production workflow and interface description, enabling applications to exchange both information and task instructions — with or without human interaction. Although standardized job ticket metadata is clearly a benefit, JDF's potential as a common development interface is its main strength. **TSR**

Even as the last errata were being resolved for Version 1.3, CIP4 began preparing for Version 1.4, which it plans to release well before Drupa 2008. At the meeting, Rainer Prosi previewed several new features, including two-way authentication, using the HTTPS protocol, encrypted JMF messages² and secure urls.

Future developments in the prepress area will address "ganging" of jobs with the inclusion of tracking for individual jobs. The new JDF will also address several content creation issues, including PDF conversion, tracking multiple document cycles and the definition of document constraints. A special Mark Creation Group is addressing a high-level definition of automated production marks.

JDF 1.4 will also take on packaging and label production issues. Most interesting, perhaps, is that flexography will be addressed more specifically. Features include the description of flexo plates and sleeves, flexo plate cutting and mounting and the description of mixed technology presses. The new version will also include the specification of shapes during content creation.

The reliability of JMF messages will be improved by developing resend policies, which is important for costing in the event of network failures. MIS issues for the next version will also include synchronization of resources not related to a job (e.g., a list of all known media types).

Timeline

According to Prosi, all new work items for the specification were to be defined by November 2006 and “last orders” are to be taken by spring 2007. Approval by the Technical Steering Committee (TSC), which coordinates and approves all specification developments done by the CIP4 working groups, is planned for this summer. JDF 1.4 is slated to be published by this fall, between six and nine months before Drupa 2008. This is an important change from Drupa 2004, where the specification (1.2) was

The components of JDF

In addition to the job definition format specification itself (currently at 910 pages), JDF also includes several Interoperability Conformance Specifications (ICS) documents, each created by a working group of qualified CIP4 members. The current eight ICS documents for Version 1.3 are:

Base ICS (the minimum requirements for JDF interoperability),

- MIS ICS,
- MIS to Prepress ICS,
- MIS to Conventional Printing — Sheet-Fed ICS,
- Prepress to Conventional Printing ICS,
- Layout Creator to Imposition ICS,
- Integrated Digital Printing ICS and
- Binding ICS.

For Version 1.4, CIP4 expects to add new ICS documents for new domains, including:

- commercial digital printing,
- packaging,
- web press,
- newspaper.

More areas are under discussion, including additions in the postpress area, although no details were disclosed at the meeting at IpeX 2006. **TSR**

published in the same month as the event, giving vendors no time to develop or demonstrate current applications, Prosi emphasized. It remains to be seen how many vendors will be able to present JDF 1.4 applications at the 2008 show.

At the meeting, some members called for a “JDF for dummies” publication, which would allow a non-technical JDF user to understand the main principles and terms of JDF. With the October 2006 publication of the 32-page *JDF Guide for Managers*,³ a joint effort by CIP4, BRIDG’S and Network PDF, the first step in this Herculean task has already been taken.

There’s been some progress with JDF certification,⁴ although so far only three products have been

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certified, including Global Graphics’ Harlequin RIP (not surprising, given Bailey’s strong advocacy within the company). The Harlequin RIP, Kodak Preps and Dynagram DynaStrip have each been tested against the Base ICS, although details of specific JDF capabilities are not spelled out in the certification summaries.

Our take

Since its inception, announced at Seybold 2000, JDF has captured the imagination of printers and their allies, offering a vision of standardized interoperability, workflow efficiency and, ultimately, reduction in labor and other costs. Its development is well under way, with product schedules timed for release at strategic industry moments.

The new specification is a major step for the project, timed to give vendors plenty of opportunity to create compelling applications for decision makers at Drupa. If the right applications are developed, JDF 1.4 could close some significant gaps between content creators, prepress operators and others, while bringing new workflows (e.g., packaging) into the mix.

Whether large print consumers and their MIS departments will accept the CIP4 vision of computer integrated manufacturing remains to be seen (MIS departments are notorious for wanting things their own way.) The need for integration with large publishers and corporate print procurement operations is a major (some would argue essential) part of the entire automation picture that transcends the efficiency needs of printers. Nonetheless, JDF is here today and is a force to be reckoned with.

In future issues of THE SEYBOLD REPORT, we will report on individual vendors’ progress with JDF implementation, and their practical results in the field. **TSR**

Top 10 Marketing Trends

L. CAROL CHRISTOPHER

With thanks this month to the Center for Media Research, *PaidContent.org*, *MediaPost.com*, *Cyberjournalist.org* and *ITWire.com*

New research

As reported by the Center for Media Research, here's a white paper by Kate Maddox for btobonline.com that suggests Internet users are as interested in creating content as viewing it, but goes beyond that to list the Top 10 marketing trends for 2007 (<http://www.btobonline.com/apps/pbcs.dll/article?AID=/20061211/FREE/612110728&SearchID=73272068794340>) ... Also, a new report by Outsellinc.com studied more than 3,000 online news users and found that one in two will check Google, Yahoo, MSN and AOL at least once a day (<http://www.outsellinc.com/store/products/320?refid=home>)... And again from the Center for Media Research, Nielsen/NetRatings study found that traffic to the Top 10 online newspapers grew 210% since December 2005, with audience growth being up 9% and unique visitors counting for 13% of total page views, up nine points in just a year (http://www.centerformediaresearch.com/cfmr_brief.cfm?fnl=070126)...

You'll be glad to know that according to The Media Audit, web sites are proving to be a huge boon to newspaper penetration (http://www.centerformediaresearch.com/cfmr_brief.cfm?fnl=070129) ... And there's more good news from the Center. Another study shows that newspapers are the preferred medium for affluent empty nesters (http://www.centerformediaresearch.com/cfmr_brief.cfm?fnl=061227). ...However, things don't look so good for traditional media where it counts — advertising (http://www.centerformediaresearch.com/cfmr_brief.cfm?fnl=070115)...A study by comScore Networks analyzed behavior and attitudes among wireless consumer segments. It will come as no surprise that the youngest segment studied (ages 18-24) wants texting, pictures, fashion, music and ring tones from cell phones compared to those of us who grew up without cellular and simply view it as, well, a telephone (registration required: http://www.comscore.com/request/wireless_mentation.asp). Anthony Smith's

Goodbye Gutenberg was published in 1980. The current issue of the Nieman Reports pays tribute with a worthwhile update (<http://www.nieman.harvard.edu/reports/06-4NRwinter/index.html>). ...Read the Spring Street Project Report that's behind the changes at the *LA Times* (<http://www.innovationsinnewspapers.com/index.php/2007/01/27/here-there-is-the-spring-street-project-report/>). ...And if you're occasionally at a loss over the latest media term, you may find answers at a new wiki site by MediaPost.com (http://www.mediapost.com/wiki/index.php?title=Main_Page).

...MediaPost also has a new e-mail newsletter, Notes from the Digital Frontier, that is a "first of its kind blog" that is a "collaboration between the students of Ball State University and MediaPost. Notes is an attempt to link the world of academia — more specifically, the next generation of media-savvy undergrads — with the commercial world of Madison Avenue." You'll have to register at <http://mediapost.com> and sign up on your account page.

Newspaper news

A *Boston Globe* story reports that the New York Times Co. is not planning on selling the *Globe* despite financial difficulties (http://www.boston.com/business/globe/articles/2007/01/19/ceo_hints_times_co_wont_sell_globe/). This even as the Boston Newspaper Guild sent out a press release about more job cuts at the paper (http://www.boston.com/business/globe/articles/2007/01/12/globe_tg_look_to_cut_125_spots/) and a second free daily is set to come to town (http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_aid=55330).

... And the *Wall Street Journal's* redesign appears to be meeting with success (registration may be required: http://www.chicagotribune.com/business/chicago0701030071jan03_0_2884434.story). For more background on the redesign and the contemporaneous enhancements of its online site, paidcontent.org has this commentary (<http://www.paidcontent.org/entry/ws-j-in-wonderland-print-shrinks-online-growth/>). ...WSJ has also, as part of a joint venture with the *Hindustani Times*, launched a new English-language newspaper in India (<http://www.contentsutra.com/entry/ht-launches-business-paper-mint>).

... *The New York Times'* Arthur Sulzberger said at the World Economic Forum that he doesn't know if the paper will appear in print within five years (<http://www.cyberjournalist.net/news/004038.php>) while the world's oldest newspaper still in circulation has dropped its print edition (http://news.yahoo.com/s/ap/20070205/ap_on_hi_te/sweden_oldest_newspaper.) And there is speculation that collaborations with Microsoft may end up in a not for free [NYTimes.com](http://www.nytimes.com) experience (<http://www.paidcontent.org/entry/419-nyt-no-decision-yet-on-charging-for-times-reader/>)

In a more radical move, the LA Times has issued an edict that the Web, not print, is its primary vehicle of delivery

The *Washington Post* is also planning a closer tie between its print and online newsrooms. The suggestion is that newspapers are increasingly relying on online ad sales to make ends meet (<http://www.paidcontent.org/entry/washington-post-bridges-newsroom-divide-between-print-and-online/>) ...In a more radical move, the *LA Times* has issued an edict that the Web, not print, is its primary vehicle of delivery (<http://www.cyberjournalist.net/news/004005.php>) which is particularly interesting coming at a time when its press operators have voted to join the Teamsters (http://www.teamster.org/07news/nr_070107_1.asp)

...Meanwhile, taking more gradual steps, the *Roanoke Times* has announced plans to launch a user-generated content site called BigLickU.com to bring together more than 50,000 students on one site (<http://www.cyberjournalist.net/news/004017.php>) while the *Florida Times-Union* has launched a hyper-local publication and site called myclaysun.com which will be similar to the much-touted *Bluffton Today* (http://www.jacksonville.com/tu-online/stories/012507/met_7557918.shtml).

...At McClatchy, look for a new business-oriented social networking experiment as the *Tacoma News Tribune* partners with Konnects.com (<http://issj.syscon.com/read/326391.htm>). In San Francisco the *Chronicle* has a fresh take on podcasts — "Correct me

if I'm wrong" reader phone calls (<http://www.cyberjournalist.net/news/004016.php>).

...In Baltimore, an interactive news site, the non-profit *Baltimore Bulldog* will debut this spring. It will combine citizen journalism, blogging and professional reporting; among the offerings will be instant restaurant reviews sent in by cell phones from patrons at local restaurants (<http://www.paidcontent.org/entry/baltimore-online-news-outlet-to-debut-with-professional-and-citizen-journal/>).

...And the Associated Press has announced a new citizen journalism venture with NowPublic.com (<http://www.nowpublic.com/node/161611> and http://www.nowpublic.com/updated_the_buzz_about_nowpublic_today and <http://www.paidcontent.org/entry/419-ap-teams-up-with-nowpublic-for-citizen-journalism-initiative/>). NowPublic's new chairman of the board is Merrill Brown, the founding CEO of MSNBC.com (<http://www.paidcontent.org/entry/industry-moves-merrill-brown-appointed-chairman-nowpublic/>).

...A possible joint bidding on the Tribune Company by the Chandler (as in Otis of the *LA Times*'s family and Rupert Murdoch seems unlikely to happen, according to a *Financial Times* report via [paidcontent.org](http://www.paidcontent.org), since Murdoch says that newspapers scare him (<http://www.paidcontent.org/entry/media-summit-murdoch-on-newspapers-it-scares-me-tribune-bid-evaporating/#comments/>). ...But *Tribune* may be wavering away all bids, anyway (<http://www.paidcontent.org/entry/419-tribune-likely-to-wave-off-all-bids/>). ...Tribune saw a 78% increase, by the way, in its Q4 earnings (<http://www.paidcontent.org/entry/earnings-tribunes-posts-4q-profit-gains/>).

On a more general note, there's a war over online metrics and the latest battle seems to be taking place on Fleet Street (<http://www.paidcontent.org/entry/british-newspapers-argue-over-whos-number-one/>)... Longtime newspaper supplier Atex has acquired Mactive, a leading advertising solution — its second acquisition in as many months (<http://www.atex.com/>). ...The CWA, with which the Newspaper Guild is affiliated, has released a policy paper calling for free, high-speed Internet across the U.S. (<http://www.speedmatters.org/> or <http://files.cwaunion.org/speedmatters/SpeedMattersCWAPositionPaper.pdf>).

...You'll now be able to pick up AP's news off your Nintendo Wii (assuming you've

been able to get one) (<http://www.cyberjournalist.net/news/004009.php>). ...

All Things Silicon

Wired has come out with its list of online companies most likely to be acquired this year (<http://www.wired.com/wired/archive/15.01/start.html?pg=11>). ...[Simplyhired.com](http://www.simplyhired.com) has announced that it has added a new offering, job-a-matic (<http://simplyhired.com/publishers>) that connects audiences of blogs and Web sites to job boards, in partnership with <http://sixapart.com>, makers of TypePad and <http://feedburner.com>, a promotions company that is on the aforementioned list of potential acquisitions. ...Monster.com's revenues were up in part because of its growing international presence (<http://www.paidcontent.org/entry/earnings-monsters-international-growth-raises-4q-income-revenues/#comments>). ...Linden Labs' virtual world Second Life (<http://secondlife.com>) is planning an upgrade that will feature a more realistic environment and voice communication capabilities along with better commerce for merchants (<http://www.itwire.com.au/content/view/8770/53/>) ... Yahoo has introduced a new XML mash-up application called Pipes (<http://www.itwire.com.au/content/view/9404/53/> and <http://pipes.yahoo.com/> and a little bit more from *Business Week* via [paidcontent: http://www.paidcontent.org/entry/419-yahoo-builds-brickhouse-to-withstand-startups/](http://www.paidcontent.org/entry/419-yahoo-builds-brickhouse-to-withstand-startups/))

... It may not be happening in California, but according to the *Wall Street Journal*, MySpace and eBay may be joining forces (<http://www.reuters.com/article/ousiv/idUSN0733256520070207>). ...And again, this time from Chicago, mdog.com has announced a way to make blogging a real-time mobile activity — along with eBay and Craigslist (<http://www.mdog.com/pc/news.php>).

There's also news from Redmond, where Microsoft has launched a new mobile DRM (digital rights management) system — a “foundational technology” — “that will allow users to use commercial content on multiple different mobile devices for a single fee.” (<http://www.paidcontent.org/entry/419-microsoft-launches-playready-mobile-drm-system/>) ...

Googlisimo

There's always something new going on at Google. Most likely you know about its recent ad inventory auction deals with newspapers, but here's a streaming audio of its director of print ads discussing the

auctions (<http://www.paidcontent.org/entry/419-dealmakers-summit-my-qa-with-tomphill-ips-of-google>). ... This month, Skype and Google users can now talk on their phone for free via [barablu.com \(http://www.voip-monitor.net/2007/02/13/Skype+And+Google+Users+Get+Free+Mobile+Calls.aspx\)](http://www.voip-monitor.net/2007/02/13/Skype+And+Google+Users+Get+Free+Mobile+Calls.aspx), which is a good thing for Skype since it has a new rival (<http://www.itwire.com.au/content/view/9389/53/>) ... From ITWire, we hear that Google is planning to do for books what Apple has done for tunes (<http://www.itwire.com.au/content/view/8784/1095/>). ... Google may find itself in competition for mobile search soon (<http://www.itwire.com.au/content/view/9242/52/>). Meanwhile, it's busy looking for an in-game advertising firm since its hopes for acquiring AdScape appear to have fallen through (<http://www.paidcontent.org/entry/419-google-potentialdeal-to-buy-adscape-hits-dead-end-looking-at-others/>).

...Meanwhile, Google is warning that online Web TV sites like YouTube and Joost may bring the Web to its knees, but help may be on the way (<http://www.reuters.com/article/internetNews/idUSL076708720070207>). In the meantime, Viacom is bypassing YouTube and making all of its MTV-owned sites available for download (<http://www.paidcontent.org/entry/419-viacom-circumvents-youtube-making-mtv-networks-video-available-to-all-o/>).

...YouTube's founders may be laughing all the way to the bank as they prepare to split \$650 million in Google stock (<http://www.reuters.com/article/internetNews/idUSN0724746020070208>). ... Guess that makes it a little easier for YouTube to start sharing revenue with users (<http://www.cyberjournalist.net/news/004012.php>).

...It was just a bit late to get into our last issue, but Google's German site [Google.de](http://www.google.de) was hijacked temporarily (<http://www.itwire.com.au/content/view/8876/53/>). ... Completely aside from its copyright issues in Belgium, Google is again caught in yet another copyright conundrum, this time for selling pay-per-click ads to companies that induced consumers to download pirated films (http://publications.mediapost.com/index.cfm?fuseaction=Articles.showArticle&art_aid=55395). ...

...Although not specifically linked to Google, we have a report that ad spending on pay-per-click is expected to decline this year because of fraud (<http://www.paidcontent.org/entry/fraud-fears-likely-slow-spending-on-pay-per-click-ads/#comments>) **TSR**

In The Bulletin Since Last Issue

February 9, 2007

The Ghent PDF Workgroup announced four new GWG specifications addressing two additional markets: large format digital printing and screen printing. The specifications answer the growing need for PDF best practices in these markets, which are rapidly moving to PDF workflows.

GBC Commercial Laminating Solutions Group, part of Acco Brands Corp., will showcase new films and its latest thermal laminating solutions for commercial, high-speed, on-demand and wide-format finishing at Graphispag 2007, held in Barcelona from Feb. 19 to 25.

Agfa Graphics launched the :Dotrix TransColor, an inkjet color printer that adds high-quality color to high-speed printing of transactional and transpromotional documents and direct-mail pieces. A powerful Intelligent Printer Data Stream controller combines with single-pass printing engines, high-resolution inkjet technology and UV curable inks to deliver a lower cost-per-copy and faster return on investment.

PIA/GATF members have a new platform from which to speak their minds as the world's largest printing association unveils Let's Talk Print, a new online community destined to be the premier "go to" Internet resource for everything related to print.

Ricoh Corp. and **EFI** announced the availability of the Ricoh Aficio MP C2500/C3000/C3500/C4500 EFI Series, an enhanced suite of versatile, color multifunction products equipped with the industry-leading EFI Fiery color digital print controller.

FUJIFILM Dimatix Inc. introduced its new Dimatix Materials Cartridge (DMC-11601), the first 1 pL cartridge-based inkjet print head designed for commercial and industrial applications. The 16-jet printhead, based on proprietary MEMS technology, is capable of high-resolution non-contact printing of fluids for applications in displays, electronics and biotechnology.

HumanEyes' pioneering 3-D technology, already available in products made for photographers and printers, is now

engineered specifically for the professional design marketplace with the release of new Creative3D. Creative3D is a stand-alone application offering design-centric tools for 3-D and lenticular effects creation, and will show for the first time at Graphics of the Americas in Miami Beach.

EFI announced the availability of a new service pack that enables users of EFI ColorproofT XF to benefit from the latest developments in the wide-format, proofing and photo markets.

RISI economists responded to the recent news of the Abitibi-Bowater merger, stating their expectation that the North American newsprint market will remain very weak for most of 2007. Abitibi and Bowater commanded a 40% combined share of the North American domestic market in 2006. The proposed merger is based on the continued operation of existing assets with no further capacity closures.

Cadmus Communications Corp. announced that it has entered into an agreement to acquire LexisNexis' conventional printing operations in Charlottesville, Va., and its digital printing operations in Conklin, N.Y., and simultaneously has entered into a five-year agreement with LexisNexis to produce substantially all of LexisNexis' printing requirements.

February 16, 2007

The E.W. Scripps Co. has taken a lesson from the venture capitalists, creating a multimillion dollar "entrepreneur fund" to encourage innovation within the company. Kenneth Lowe, president and CEO of the company, will discuss the fund and other strategic developments at the World Newspaper Congress, to be held in Cape Town, South Africa, in June.

EFI and **X-Rite** announced a breakthrough solution for prepress professionals, publishers and creatives in production environments.

Ideal for those who need to constantly measure test charts and update color management profiles, the powerful combination of **EFI's** Bestcolor-driven Colorproof XF highly scalable and versatile client/server-based software and X-Rite's

new Eye-One iSis, the precise, automated spectral chart reader, increases speed, accuracy and ease-of-use for customers executing high-end proofing, remote proofing, digital printing, photo processing and fine art printing.

A new report reveals that both print providers and suppliers are optimistic about print provider revenue moving forward, with the strongest growth over the next two years expected to come from digital full-color printing and variable data printing.

Pantone Inc. announced an upgrade to its award-winning, easy-to-use monitor calibration solution, Pantone huey, to run natively on the new Windows Vista operating system. The huey software update is available free from www.pantone.com.

A new **Print Industries Market Information and Research Organization** (PRIMIR) study, Small Commercial and Quick Printer: 2006-2011 investigates the nature of quick printers (franchise and independent) and small commercial printers (less than 20 employees) in today's marketplace.

PODi, the Digital Printing Initiative, announced a new release of the Personalized Print Markup Language (PPML), the interoperability standard for variable data print production.

GMC Software Technology announced the release of Version 3.3 of PrintNet PA software. Users benefit from browser-based print administration, system status checking via SNMP, and other capabilities that optimize print workflow.

Printing and graphic communication companies now have access to the latest costing information for their digital prepress operations with the release by **NAPL** of its 2007 Budgeted Hourly Cost Studies for Digital Prepress Operations.

Printable Technologies Inc. announced the release of the FusionPro VDP suite, Version 4.1. Available as a free upgrade to current FusionPro 4.0 users, FusionPro 4.1 delivers a variety of new and enhanced features that make the design and composition of variable data documents faster and easier for both technically-savvy and occasional users. **TSR**

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