American PRINTER

PDF workflows for today and tomorrow

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While many tools were developed to streamline the desktop-publishing process, the workflow had its limitations. First, you started with a suite of creation applications, then assembled the content using various layout tools. But the consolidated document wasn't for distribution; it was just a preparation for PostScript processing, which could move it into a more deliverable form, such as print. If you wanted to reuse or edit content after it had been consolidated, you typically had to go back to the original creation application. This workflow supported print publishing, and, with some modifications, digital distribution via the Internet or CD-ROMs.

Clearly, we needed a more flexible process. That's what we got when PDF was introduced more than 10 years ago. Unlike conventional workflows, PDF enables a broader, more universal document exchange and publishing workflow. On one hand, this is advantageous: It enables PDF to be used by all kinds of industries with diverse publishing and distribution requirements. On the other hand, this poses a challenge: Users don't have identical requirements. PDF, for example, supports sounds and movies — things we can't yet image on a printing press.

To address the needs of disparate PDF users, industry standards groups are developing the PDF/X series of specifications: PDF/X-1, PDF/X-2 and PDF/X-3.

PDF/X-1

Supports the complete exchange of CMYK data. PDF/X-1 has been approved.

PDF/X-2

Supports the exchange of CMYK and/or color-managed data where some of the data required for final output, such as fonts or high-resolution picture data, are uniquely identified but exchanged separately from the main body of the data exchange. PDF/X-2 is still under development.

PDF/X-3

Supports the complete exchange of CMYK and/or device-independent color. PDF/X-3 is currently under review and is expected to be approved shortly.

These targeted PDF subsets ensure that a basic set of specifications on the requirements of a PDF file will support the print-production workflow. The key word here is “basic.” We may know we want fonts — but no movies — in a PDF that's going to be printed, but it's harder to determine the acceptable resolution for a platesetter or press. As in a conventional workflow, there are different requirements dictated by the equipment or process. (See “I scream, you scream, we all scream for… PDF,” on p. 45.)

Although Adobe has recently incorporated PDF as a content format in its creative application suite, content creation isn't what PDF does best. MS Office, QuarkXPress, InDesign, Photoshop and similar tools will continue to play an essential role in the publishing process.

EDITING WITHOUT EXTERNAL APPLICATIONS

Software developers have given a fair amount of attention to PDF editing capabilities.

Adobe Acrobat's built-in editing capabilities let users edit text. Extended features permit raster images and vector files to be edited, provided Photoshop and Illustrator are available. Both applications must reside on the local machine, however, to take advantage of this seamless editing workflow.

Other PDF-editing tools include:

Enfocus Software's (San Mateo, CA) PitStop is a PDF plug-in that lets users edit text, vectors and colors, as well as add, move and remove almost anything. Users also can alter object (image) size, resolution, color and more without any additional external applications. PitStop also features the company's Certified PDF technology to ensure that files are created according to the specific requirements of a production system.

Lantana Software's (Fremont, CA) PDF ImageWorks plug-in offers cut, copy, paste, resize, rotate, extract and replace options. Users can also adjust an image's appearance using tools that include color space, conversion, downsample/subsample, send to back/bring to front, mirror, brightness/contrast, color adjust and despeckle.

Apago's (Alpharetta, GA) ImageAlter allows users to shrink the file size of any existing PDF file by downsampling and compressing images inside the PDF file. The use of “alternate” images enables ImageAlter to offer speedy redraw times.

Trapping is an integral part of print-production workflows. Heidelberg's (Kennesaw, GA) Supertrap uses algorithms derived from its DaVinci trapping engine to execute vector-based trapping on native PDFs. Supertrap is a standalone plug-in, which is essentially the same as the trap editor found in the Prinergy PDF workflow co-developed by Heidelberg and Creo (Burnaby, BC). Software from ScenicSoft (Lynnwood, WA) and Ultimate Technographics' (Montreal) Trapeze both support native PDF file trapping.

Most popular imposition tools have either added PDF support or are in the process of doing so. Examples include ScenicSoft's PREPS, Dynagram's (Quebec) Dynastrip, Quite Software's (London) Quite Imposing and Farrukh System's (Borehamwoods, England) Imposition Publisher. Pandora is ScenicSoft's PDF-based imposition software.

PREFLIGHTING PDFS

Just as there are a number of good utilities that will preflight application files, there's a good selection of preflight tools for PDF production workflows. Options include Enfocus' PitStop and PitStop Server, Callas Software's (Berlin) pdfInspecktor2 and Apago's PDF/X Checkup. Callas, in conjunction with some German and Swiss industry associations, also has released PDF/X-3 Inspector, a freeware application that can check PDF/X-1a and PDF/X-3 files.

Both Markzware Software's (Santa Ana, CA) FlightCheck, as well as Extensis Inc.'s (Portland, OR) Preflight Pro, offer enhanced PDF support. Both also offer subscription-based services for Internet-based PDF preflighting: MarkzNet and Preflight Online. (See “Preflighting takes off,” July 2001, p. 40.)

At Ipex, Markzware demonstrated a Mac version of FlightCheck, as well as a PDF preflight solution for content creators. Code-named “Truefile Check,” it supports adherence to a central job specification.

PDF-proofing solutions include standard print-based systems, but the PDF format and its support for the color-management process make it an ideal format for both hard and soft proofing. As part of Acrobat 5.0, Adobe introduced a large suite of tools for review and markup. These tools also include the ability to digitally sign the proof, and to manage and keep records of the notes and author. There are also several third-party proofing solutions — see “Remote proofing delivers,” September 2001, p. 36.

There also are tools that boost overall efficiency. Quite Software's Quite a Box of Tricks, for example, handles conversion to CMYK or grayscale, shrinking images to reduce PDF file size, thickening “hairlines,” transformations and a host of other tasks.

Lantana Software's Crackerjack can do color mapping, font-embedding and color conversion, and offers many output-device control tools. These include rotation, negative/positive selection, adding slug lines, etc. Callas' MadeToPrint for

Acrobat controls one or more print jobs for different output devices through a single dialog box, thus structuring and automating a workflow at the same time. MadeToPrint also allows PDF files to be printed to single or multiple printers, imagesetters, and/or to EPS and PostScript formats in a single operation.

Options abound for automating PDF workflows. Using a series of configurable hot folders, you can build a PDF workflow using supported products. Some of these include tools previously mentioned from Quite Software, Apago and Callas, as well as additional support for Heidelberg Supertrap. An increasing list of companies are implementing support for this simple but effective workflow-automation solution.

TURNKEY OPTIONS

Traditional prepress workflow suppliers also offer turnkey PDF options. Some handle job estimating, order entry, PDF creation and tracking, and facilitate communication of job data from prepress to postpress.

Agfa (Ridgefield, NJ), one of the first companies to offer a PDF workflow, recently released ApogeeX. Using PDF, JDF and Digital Film (Agfa's name for 1-bit TIFF files), it brings together a wide range of sophisticated features in one application — including job management, advanced job tickets, PDF trapping, enhanced connectivity, and Web approval of pages and flats, with connectivity to the necessary output devices.

Creo's Synapse solutions join its existing line of Brisque and Prinergy prepress tools. Synapse InSite supports Internet-based communication between printers and their customers, streamlining the process of job submission, job-status tracking, online collaboration, and remote proofing or approval.

Synapse Prepare provides designers with the tools to easily create PDF files from QuarkXPress that match the exact specifications of their print vendor. Order entry and job costing can be handled by MIS options from Creo's sister company, Printcafe (Pittsburgh).

OTHER UPDATES

DALiM (Kehl, Germany) recently enhanced its TWiST product line with Twist DiALOGUE, an online facility that allows the remote and collaborative viewing and proofing of high-resolution files via the Internet. TWiST users can give their customers the ability to view and approve single and imposed pages from any location; check production parameters (page size, resolution, etc.); and take on-screen densitometer measurements if desired. DALiM also recently introduced TWiST WebLiNK. This module provides full access to the TWiST Workflow Manager via a standard Web browser, giving users the freedom to manage production workflows from any location.

Esko-Graphics (Gent, Belgium) supports PDF workflows through its FastLane Next Generation product line. Based on its GRS file format, which is a raster/vector format similar to PDF, FastLane allows Esko-Graphics to leverage its long history of development and apply it to PDF files. While the company has yet to incorporate more integration of upstream workflows that reach the document-originator step, FastLane is a fairly automated, task-driven prepress system.

Fuji Photo Film U.S.A., Inc. (Hanover Park, IL) supports PDF workflows through its CelebraNT RIP. This Adobe PostScript 3 CPSI-based RIP includes job tickets, in-RIP trapping, job queue and job info windows for monitoring and control.

Heidelberg's Prinect family of products includes Prinance, an MIS for printing companies that supports all steps from estimating and job handling to invoicing and follow-up costing.

Heidelberg's PDF workflow product, MetaDimension, was introduced last year — it now offers workflow support through the pressroom as well as the bindery, using the JDF standards developed by the CIP4 committee. MetaDimension is a job-ticket-controlled workflow. Its modular structure enables it to be easily adapted to many different workflows. Depending on your requirements, you can include OPI, trapping, color management, innovative screening methods, impositioning, PPF connectivity and proofing solutions.

Heidelberg has also announced HeiPort e-services to improve the efficiency of the print-buying process, by enabling remote proofing, electronic orders and more efficient job management. This system can be linked to the Prinect system.

Screen USA's (Rolling Meadows, IL) PDF-workflow solution, Trueflow, lets users automate their workflow paths. Once the main workflow paths have been automated, it's easy to select the right path for different jobs as they arrive. For output-ready jobs, users can choose a completely automated workflow path based on intuitive job tickets and hot folders. A late-binding workflow path can be used for jobs that are likely to involve late changes.

Through the use of new technologies that use CIP4 standards, there will be increasing automation and flexibility being integrated into future PDF workflows. And because PDF plays such an important role in the business world outside of professional publishing, we can expect to see lots of additional development of new and expanded workflows targeted at niche markets.