American PRINTER

Digital Workflows MEET THE CONTENT CREATOR

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Talk of digital workflows tends to focus on how the technology affects a printer's day-to-day operations. But in this age of cross-media publishing, printers also need to step back and consider their clients' (the content creators') workflows. The need for digital content — and its increased repurposing — has caused many content creators to shift from an analog-to-digital workflow to an all-digital one. This affects art creation, image capture and text generation, as well as the management of all these digital assets.

In addition, the content increasingly comes from non-traditional sources. At Seybold San Francisco this past fall, Bruce Chizen, president of Adobe Systems (San Jose, CA), cited recent studies that predict more than 73 million digital cameras will be in operation worldwide by next year. Add to this the trend of decreasing costs and increasing availability of color scanners, which have become as mainstream as a typical household appliance.

The software that supports these tools are even being introduced into the core operating systems of computers, such as Mac OS X or Windows XP. This body of digital content will undoubtedly find its way into your production process at some point, if it hasn't already. Printers' and customers' processes are increasingly intertwined — what one does affects the other.

CREATING AND RECOGNIZING CONTENT

The professional software tools used for content creation are being adapted to address non-print-related creation. Adobe Photoshop, a core image-creation and editing application in print production, is a valuable tool for non-print content as well. The addition of ImageReady, a Web-based image-preparation tool, into Photoshop was the first of many changes that broadened the scope of content creation. The next step came with the inclusion of Flash authoring in Macromedia (San Francisco) Freehand and SVG file creation in Adobe Illustrator.

Content creators and their printers also need to be able to identify all of this content so that it can be easily found and used in more automated processes. Many data- and content-management systems offer ways to identify the metadata as well as attach them to the content. Users can search either manually or through an automated system by any of the attributes assigned to the content assets. In most cases, the applications can directly communicate with these content-management systems using a SQL database structure.

It probably makes more sense to do some of this at the time of creation, however. For example, Macromedia has included International Press Telecommunications Council (IPTC) information in files that will be used by the news media. IPTC-aware third-party applications can access IPTC header information, such as copyright, credits, captions, search words and other data used to catalog image files.

Adobe, for its part, recently introduced eXtensible Metadata Platform (XMP). In addition to supporting eXtensible Markup Language (XML) tags, XMP is said to facilitate metadata exchange between Adobe applications. Eventually all Adobe applications will support XMP.

For digital text creation, Microsoft (MS) Word is by far the most widely used application. Word, and most of the other MS Office applications, support metadata tagging through XML. Additionally, HyperVision Ltd. (Chicago) has introduced WorX, an MS Word plug-in that enhances this capability. Clearly, the foundations for tagged content throughout the process are becoming mainstream, and will facilitate further enhancements to the creative content-production process over time.

LAYOUT TOOLS

Once content is created, it must be put into a layout or form. Vendors of image- and text-layout software have enhanced many of the necessary tools to handle multiple output needs. Quark Inc.'s (Denver) QuarkXPress is the most widely used professional page-layout application for print. XPress 4.1 supports XML metadata through the avenue. quark extension; 5.0 does it natively. This can turn XPress into an automated cross-media layout tool.

The recently released Adobe InDesign 2.0 is a good example of an integrated cross-media layout tool. Through its XML in-and-out capabilities, as well as the new XMP support, users can import and export images and text in a manual or automated workflow, to produce print as well as Web-delivered product.

Users wanting to create long or technical documents in a cross-media environment may prefer Adobe Framemaker. The application supports XML, HTML, SGML (separate version) and structured PDF. This flexibility is wonderful, although the design tool set isn't as robust as that in Quark or InDesign.

QuarkAPS and Adobe InScope fall into a new breed of layout production-support software that also allow content to be created and managed in a collaborative environment. (Other process-support issues must still be addressed to ensure a successful output, however.) While they can work in many different production environments, QuarkAPS and Adobe InScope have been tailored to catalog and periodical development.

Tools such as Adobe GoLive or Macromedia Dreamweaver can pull content into a layout appropriate for Web distribution. Once you have managed tagged data, there are many tools beyond the standard page-layout package that can pull content together for Web output. Many of these applications are available for large-scale publishing needs. Those working with standards like XML also have the option of building their own data-driven publishing system.

PROCESS SUPPORT

Any production process requires various levels of support to pull individual software tools and file formats together. At the core is a data-management solution (which more recently has evolved into a content-management system) for text and images.

Increasingly, developers have added other process-management tools into these systems to address some of the problems that arise with operating in an all-digital workflow. Many of the systems facilitate image conversion, for example. Since the production process for a printed image differs from that of one posted on the Web, printers and their clients must ensure that the image meets the requirements appropriate for its final destination. These specifications fall into a number of categories, primarily dealing with color and content structure. Data- and content-management systems usually support file-format conversions.

Using separate — or integrated — ICC-based color-management systems usually means the image color space can be converted to the specific output device when necessary. The basic color-management conversions can be handled while printing out of certain creation applications, or by processing through color-management server solutions such as ICC AutoFlow from Praxisoft (Sterling, VA) and iQueue from GretagMacbeth (New Windsor,

NY). Or, it can be handled as part of data management, such as in Canto's (San Francisco) Cumulus and Xinet's (Berkeley, CA) digital-asset-management products.

Many of these same systems can address image-resolution issues. While image-resolution reductions are fairly commonplace, some software even have provisions to increase resolution using specialized image-enhancement technologies. Stand-alone solutions are also available through products like LizardTech's (Seattle) Genuine Fractals and MrSID.

While most of the products discussed don't currently support internally stored metadata, more comprehensive data systems can be seen in MediaBin (Atlanta), the TEAMS product from Artesia Technologies (Rockville, MD) or Target 2000 from Progressive Information Technologies (Emigsville, PA).

Among the latest conversion and management tools are those that actually let you manage the layers and channels that were created and saved in Photoshop. For example, you can turn off the animated layers for an image that is going to be used for print, and turn them on for those going to the Web. Or, you can use an image with a specific background in one situation, and silhouetted with a drop shadow in another. There are manual tools that allow this, such as ALAP's (Carlsbad, CA) ImagePort extension for Quark. InDesign has built-in support for this functionality.

A number of products that act as process-support servers to a content-management system address color, resolution, file type and Photoshop layers, and can be further integrated into an automated workflow. Altercast from Adobe is an excellent example.

RESOLVING COLLABORATION ISSUES

Increasingly, creating and assembling content is becoming a collaborative process among printers and clients. In a collaborative workflow, each task must be checked to ensure its compliance to the process as a whole. This preflight process can be the same as the manual one you would perform in your own production process, automated or even built into the workflow itself.

Most printers have had firsthand experience with products such as Markzware's (Santa Ana, CA) FlightCheck and Extensis' (Portland, OR) PreflightPro in a manual preflight workflow. Versions of these products also exist in an automated server-based solution. These systems are attracting attention among content creators because they help ensure and streamline the process.

For those working in a PDF-based workflow, a host of manual and automated collaborative tools can help support the process of content publishing.

Agfa's Apogee Create lets content creators convert PostScript or EPS files into prepress-ready PDF files. In addition to fonts, images and graphics, the files reportedly capture spot colors, multitones, gradients, colorized TIFFs, trapping, trim and bleed.

Users can conduct manual PDF preflighting through pdfInspektor from Callas Software (Berlin) or PitStop from Enfocus (San Mateo, CA). There are also server-based solutions that can be integrated and offer benefits even at the creation stage. Enfocus' PitStop server and Instant PDF let users predefine production requirements, ensure files, track changes and fix problems throughout the entire production process, from creation to premedia. Adobe Acrobat 5.0 has also added several collaboration tools that support color and content proofing and markup.

If you are looking for a more elaborate system that not only facilitates collaboration but even automates it, then SmartPath from SmartPath Inc. (Morrisville, NC) might provide what you need. If you want to collaborate online,

RealTimeImage (San Bruno, CA) offers a solution that allows you to evaluate content and color, including markup, in a real-time environment.

Fuji Photo Film U.S.A., Inc.'s (Hanover Park, IL) myfujifilm.com went online at Print 01. This Web-based e-production tool offers printers and their clients job and asset management as well as preflighting, file transfer, and hard and soft proofing.

With Prolatus' (Minneapolis) server software products, printers can offer their clients remote-color correction and image editing. The products are bandwidth-independent — large files can be transmitted on any Internet connection.

Remote color proofing is also supported by DuPont, Creo, Itec, Kodak Polychrome Graphics, Heidelberg and others. (See “Remote proofing: close at hand,” February 2002, p. 18.) At Print 01, Heidelberg (Kennesaw, GA) and RealTimeImage announced a joint distribution partnership that combines Heidelberg's color-management and RIP technologies and RealTimeImage's image-streaming, online collaboration and proofing technologies. Heidelberg is integrating and reselling RealTimeImage's online proofing technology as HDProof.

Networked Graphic Production, an integrated production environment that extends from the creative desktop to delivery of the finished product, was the cornerstone of Creo's (Vancouver, BC) Print 01 presentation. Current Networked Graphic Production components include Synapase Prepare, which creates print-ready PDFs on the creative desktop according to a printer's specifications. These automated tools allow creative professionals to print directly from QuarkXPress, create PDFs and preflight files.

ONLINE COLLABORATION

InSite for Creo's Prinergy and Brisque workflows is an Internet collaboration tool that facilitates online job submission, remote proofing, approvals and change requests. Internet connectivity permits remote job submission directly into the production workflow; collaborative tools allow creative and technical staff to review jobs simultaneously. Online proofing and annotation tools accelerate the approval and change-request process.

Dalim's (Kehl, Germany) new Dialogue component of its TWiST workflow enables online remote and collaborative viewing and proofing of files. Clients can view and approve pages, check production parameters and take on-screen densitomer measurements.

Finally, at MacWorld this past January, Creo announced a new project-organization product. SixDegrees automatically tracks, organizes and associates project files, contacts and e-mail. It promises to assist in one of the most difficult collaborative production tasks: keeping it all together!

We are just scratching the surface of what will be available in the future to support content creation and publishing — most of these content-creation and management solutions are either very new or upgrades from existing manual systems. The future does, however, look promising.

Pros, cons of PDF

GATF (Sewickley, PA) recently conducted a survey of PDF use among commercial printers and prepress facilities. The results, tabulated from 83 useable responses, were presented at the 2002 GATF Tech Alert Conference earlier this year. Forty-seven percent of the respondents were commercial printers. Some responses of note:

- Approximately 22 percent of incoming files are PDF; 54 percent are still in Quark.
- "Faster system throughput" was most often reported as the greatest benefit of PDF. "Reduced cross-platform issues" ranked most often as the second-best benefit of PDF.
- Eighty-eight percent, however, reported clients don't make PDF files correctly. Sixty-four percent noted PDF files are more difficult to edit than native files.

For more information on the survey, contact Julie Shaffer at jshaffer@gatf.org.