Extreme measures

Ken McMahon explains how a PDF-based approach takes the uncertainty out of those final stages.

Sending pages to an output bureau can be a worrying, even traumatic experience. Preflighting, using either software or your own checklist to make sure there are no nasty little accidents, such as process colours defined at spot plates or RGB picture files waiting to trip you up, can reduce the heartache. But collecting all those files and sending them off to the bureau will probably never be an entirely stress-free exercise.

One of the worries is that you rarely get to see a page before its PostScript has been rasterised and rendered by an expensive imagesetter. And whether you're talking Iris inkjets or four-colour separated film, once you cross the electronic divide and enter the world of physical things, mistakes can be costly.

One way to get a sneak preview is, of course, to create PDF files using Acrobat Distiller. This not only offers a quick, cheap and convenient way to provide client proofs, it often highlights problems that preflighting may not pick up.

Adobe quickly recognised the potential of PDF as a prepress delivery mechanism and has made it one of the key components in PostScript Extreme, its prepress workflow management suite. The other components are PostScript 3 and PJTF (portable job ticket format), a companion standard to PDF.

As well as being able to proof your output onscreen, as a prepress delivery system PDF has several advantages over the 'collect for output' method. You need only one file, not hundreds, and that single file will, thanks to compression and downsampling, be much smaller than the sum of all the files (layout document, pictures, fonts) it consists of.

You don't have to rely on a bureau having the same applications, extensions and fonts as you, and they can perform trapping, separation and even file editing in the rip.

In PostScript Extreme, the PDF is the digital master that contains your document and its content – text,

DISTILLER CAN DOWNSAMPLE IMAGES TO A SUITABLE RESOLUTION FOR HIGH-END PRINTING
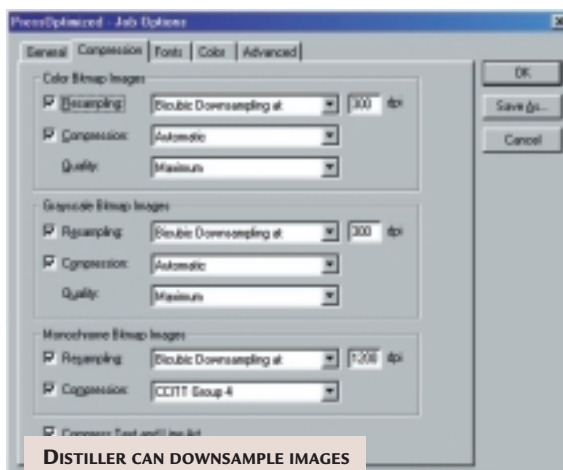
formatting, pictures and fonts. PJTF is used for processing that content. A job ticket, independent of the PDF, contains information about the state of the document and what needs to happen to it. This work is then done by Job Ticket Processors (JTPs). Once a JTP has finished, it updates the job ticket and the document passes on to the next stage.

The most important JTPs, written by Adobe, are the Sequencer, Co-ordinater, Normaliser and Printer. Other JTPs will be written by independent developers (PostScript Extreme is an open architecture) to provide bespoke functionality.

The Job Ticket acts as an audit trail and subsequent JTPs can act on information recorded by previous ones. It's also possible to make changes much later in the production process. For example, halftone screen and trapping information is contained within the job ticket. So, if a last-minute change of paper required these to be altered, you wouldn't need to go back and edit trap and screen specifications in QuarkXpress.

Other functions that would be handled by JTPs include colour management and imposition. Adobe calls this late binding.

You don't need to be involved in complex pre-press workflow

management to take advantage of a PDF-based approach to bureau output. Using Acrobat 4 to create composite PDF files for high-resolution output is straightforward enough.

The first thing to do is prepare your files for output and preflight them as usual. Next you need to print composite files. It's important to use the Adobe PostScript printer driver and Acrobat Distiller 4 PPD which you can get from www.adobe.com/products/printerdrivers/windows.html#adobeps43. The Distiller 4 PPD doesn't write device-specific information to the PostScript file, but does allow you to specify custom paper sizes.

Make sure you include all the fonts – unless they are in the PostScript file you won't be able to embed them in the PDF. If you're using QuarkXpress it's tempting to take a shortcut and save pages as EPS files, but this doesn't allow you to include the fonts, or specify the page size and other important parameters.

Next, you need to look at the predefined job option settings and decide whether you need to edit them. Distiller 4 provides three settings – press, print and screen-optimised. The press-optimised settings are designed to maintain all the high-end information required for commercial printing. You can review these by selecting PressOptimised from the job options pop-up menu, then choosing settings/job options (CTRL & J).

The job options dialog box has five tabs – General, Compression, Fonts, Colour and Advanced. When producing PDFs for screen viewing, the downsampling and compression options are set to produce the smallest possible file sizes, a case of never mind the quality, feel the width. For press output, the reverse is true, but it's still possible to save some space.

If you set downsampling to 300dpi

Questions & *answers*

Q I have just bought a photo-quality printer and one of the things I am looking to do is to scan in holiday snaps and print them off.

Could you tell me which is the best format (TIFF, BITMAP, JPEG, etc) to use to save the scanned image as, in order to produce the highest-quality prints.
ANDY GUEST

a *Scan them so that, at the output size the resolution is 150dpi, then save them as JPEG files with medium compression if your package offers a choice. This will provide good-quality prints and keep the file sizes reasonably small, so large collections of photos won't eat into your hard drive space. When you print, you'll probably get best results if you turn off colour management or photo-enhance features in the print dialog box.*

Q All of a sudden, my copy of Photoshop refuses to start. It gets as far as the startup screen, then freezes. I've tried reinstalling it, but to no avail. Help!
MARTIN BABCOCK

a *It sounds as if your preferences file is corrupted.*

If you find and delete it Photoshop will create a new one on startup. With Photoshop 5, Adobe split the preferences file into three – Adobe Photoshop 5 prefs.psp is probably the one causing the problem. If the other two, Colour Settings.psp and Actions Palette.psp, are OK, although you will need to put your general preferences back the way they were, you will still retain any colour settings and actions you previously set up.
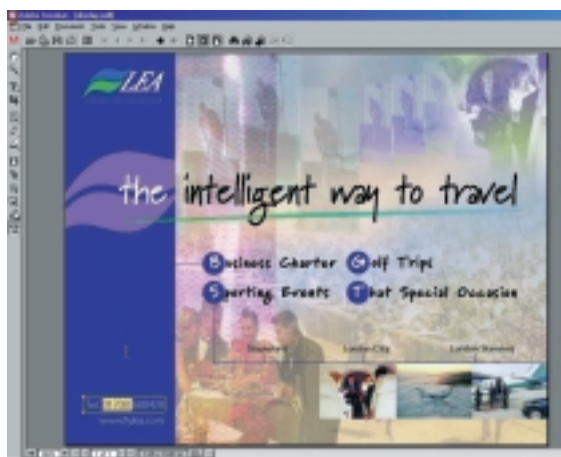
MAKING LAST-MINUTE EDITS TO THE PDF IN ACROBAT 4

The font-embedding tab lets you embed fonts and avoid the unsightly appearance of courier, unless, of course, you intended it to be there. The safest thing to do here is embed all fonts and select Cancel Job when embedding fails.

If you choose to subset embedded fonts, Distiller will only include those characters present in your document. This will reduce the file size, but also your chances of making last-minute corrections if the required glyphs aren't present.

Acrobat 4 ensures that your own fonts and font metrics are used by creating a custom name, so there's no danger of text reflowing or other funny business as a result of your bureau using a different version of the same font.

(good enough for 150-line halftone screen output) then Distiller will downsample images that are more than one-and-a-half times that resolution.

For example, it often happens that you intend to use an image full-size on the cover, but later relegate it to a column on the back page. You place the original scan and reduce it, say to 25 per cent in your layout application. Distiller would downsample this image to 300dpi at the printed size, saving on file size with no loss in quality.

Finally, make sure you check the compressed text and lineart box – Distiller uses lossless compression for these elements, so again there will be no reduction in quality.

FOR PRESS OUTPUT YOU NEED TO EMBED ALL FONTS AND SET THE JOB TO CANCEL IF THIS FAILS
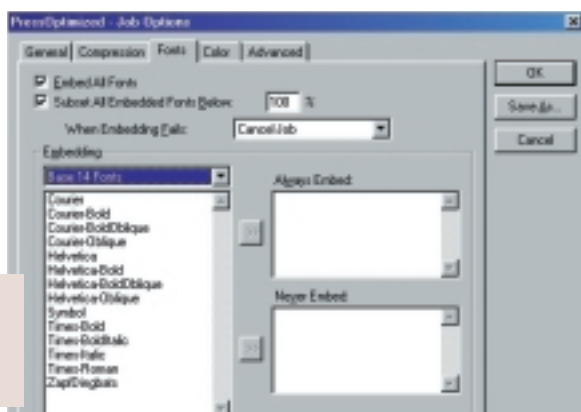
There are problematic issues when using composite PDFs as the basis for process colour separated output. First, if your bureau uses a PostScript Level 2 rip, duotone EPS files won't separate correctly.

To take full advantage of PostScript Extreme the answer is to find a bureau that uses PostScript 3 rips, although you will need to be using Photoshop 5.0.2 for your duotones to separate correctly. Colourised tiffs and spot-to-spot colour gradients also may not separate properly.

DCS files pre-separate images into their component process colour plates and add a composite preview file. They're favoured by many service bureaux as they can provide studios with preview files and keep pre-separated files to be matched up by the OPI server at output.

They are also quicker to rip than composite EPS files. However, they won't work in a composite PostScript file – only the preview is printed to the black plate.

An option for Quark users is SmartXT from Total Integration at www.totalint.com/8.98.html, which recombines DCS files into a single file when creating a composite PostScript file. If you're opting for a composite PDF workflow, in the absence of other strong reasons for sticking with DCS, it would seem sensible to abandon it in favour of single-file EPS.

There's more information on PostScript Extreme and Preparing PDFs for high-resolution printing is at www.adobe.com/print/technologies.html.

PCW CONTACTS

Ken McMahon welcomes your feedback on the Graphics &DTP column. Contact him via the PCW editorial office, or email graphics@pcw.co.uk