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The recomposite PDF workflow

Now there are a couple of new tricks for saving Quark trapping in composite PDFs

by Lerrick Starr

It's safe to say that the PDF workflow is here to stay. It's also a safe bet that Mac prepress people will resist PDF for high end print to the bitter end. It is even passionately discriminated against by those who should know better, yet there are few file formats that image as reliably and on as many different output devices as the ubiquitous PDF.

That's not to say that there aren't bad PDFs created by the inept or inexperienced, but there are also native QuarkXPress, Adobe InDesign and (gulp) Adobe PageMaker files that take more than a little effort to image. And there are ways to fix delinquent PDFs using tools like Enfocus PitStop Professional 5.0 (free download and functional demo version at www.enfocus.com)—that is, everything except image resolution. And in any output format, low image resolution is a show-stopper.

The whole point becomes moot for Mac heads with the introduction of Jaguar, where everything you see is based on a PDF architecture. Now any screen capture in OS X creates a PDF, not a PICT. And PDF has definitely become the file format of choice for print-destined jobs created on the wrong side of the tracks—which is to say, from any version of Windows. *Nobody* wants to image from PostScript created by PC applications.

A BRIEF BACKGROUND

In 1993, Adobe invented an application called Carousel and along with that, the Portable Document Format (PDF). But pre-

press functionality was not originally part of Adobe's PDF strategy—its thinktank included the paperless office and the digital document and output on nothing better than the office printer—and in those days, 300 dpi was pretty good print quality for an office environment.

It wasn't until November, 1996 that prepress considerations were addressed with the release of Acrobat 3.0. Given the benefits of a PDF workflow—which include font and image inclusion and repeatable output regardless of device—that's about six years too long ago.

Why so long? There has been one big barrier to the widespread adoption of PDF for prepress imaging—the absence of Quark trapping in composite PDF files. This has been a major stumbling block in the workflow, despite the fact that trapping is a function the application does quite well. Although a QuarkXPress file could always be turned into a composite PDF, the useful and generally reliable output of the built-in trapping engine could not be preserved.

But there are now a couple of ways to accomplish this task using two relatively mature products, Agfa Apogee Create and Creo's Seps2Comp. Combined with Acrobat 5.0's new Overprint Preview, these products make it possible to recombine separated PDFs, restoring composite functionality. They are viewable just like composite PDFs, and they print just like composite PDFs—and it doesn't even matter which way they got into that state.

ACROBAT 5'S NEW OVERPRINT PREVIEW IS QUITE A BIT MORE REVEALING

Acrobat 5 brought with it a vital new feature—*Overprint Preview* (located under View>Overprint Preview). As the name suggests, toggling this tool “on” makes overprinting objects look as they will appear on press, showing mixed colors as they will be reproduced in the job. This functionality, originally introduced in Adobe In-Production (now discontinued), is the transparency engine that helps make a “recomposite” PDF workflow accessible.

However, it was a new Acrobat plug-in by Quite Software that got me thinking about the advantages of trapped PDFs.

Quite Revealing offers options for viewing the different attributes of a composite PDF (download a time-limited but fully functional version of this plug-in from www.quite.com). In its second window, a host of other useful information about the document can be viewed, including colors (either individually or in combination), objects which overprint, fonts (embedded or unembedded), transparent objects, image resolution, or transfer functions.

This plug-in also allows you to modify the file. On the Plate list, colors can be remapped, overprints invoked or removed, and plates merged or renamed. Other dialogs let you fix duplicate font names, check image resolution, remove transparency effects, even set profiles for color or grayscale objects.

Acrobat's Overprint View in concert with Quite Revealing's Plate list allows the opportunity to visually inspect traps in any PDF, as long as they are set at a minimum of .144 pt, which is the QuarkXPress default setting (and which translates into an Illustrator trap of a little less than .3 pt).

With Quite Revealing, the trap status of recombined composite PDFs is now visible—so let's go ahead and build what we'll call a “recomposite” PDF workflow.

HOW TO KEEP SOME OF QUARK'S TRAPPING INFO

Composite PDF created from Quark-generated PostScript will include information related to two trapping conditions—overprint or knockout. If the job only requires an overprint or knockout decision, then those trapping states are preserved as long as Acrobat Distiller's Preserve Overprint Settings box is checked under Settings>Job Options>Color Tab>Device Dependent Data.

Unfortunately, if you require all the little traps that QuarkXPress creates internally among the images, frames, type and graphics, they are simply not available through this approach. The only way to turn on Quark's trapping engine is to output the job in Separations mode.

However, when the separated PostScript file is distilled, a PDF is created with as many pages as there are colors in the job, all viewable only in greyscale. This isn't necessarily a bad thing, in the event that you want to consider it digital film (complete with color names and crops). But it's difficult to look at the separations and know how the final job will appear—and without a RIP, digital proofing is near impossible.



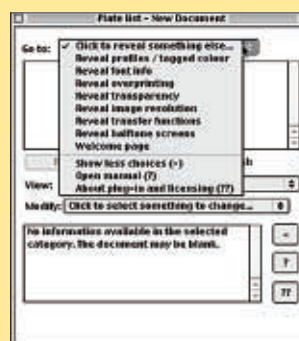
Here's the view of a recomposed PDF by Apogee Create as seen in Acrobat 4...



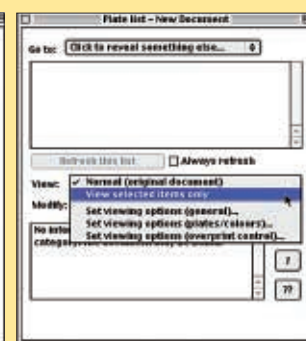
...but Acrobat 5's internal transparency viewer makes all the layers show up.



A trapped Acrobat 5 PDF viewed at 1600%, created from a QuarkXPress document using the default trap setting of .144 pt.



Quite Revealing's list of view choices. Each has different options available.



The all-important location of the option that opens a second view of the PDF showing the effects of your choices.



Composite PDF with view showing magenta and yellow plates.

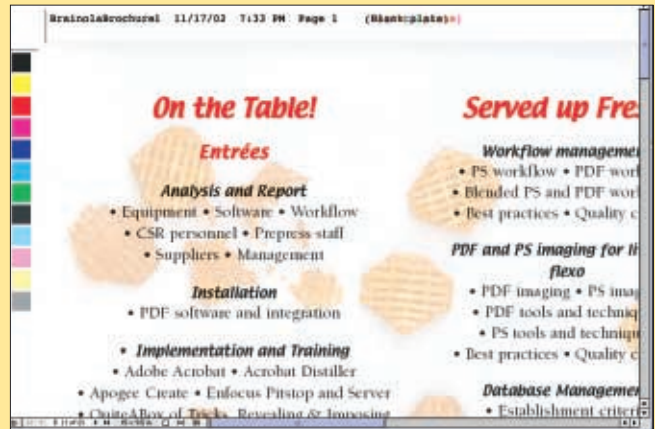


Composite PDF with view showing cyan and yellow plates. Note that traps can be seen in both combinations of colors.

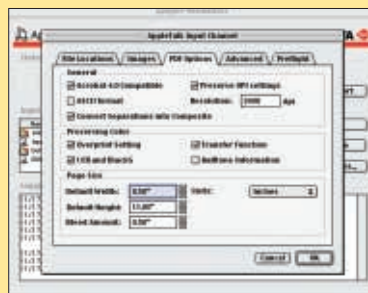
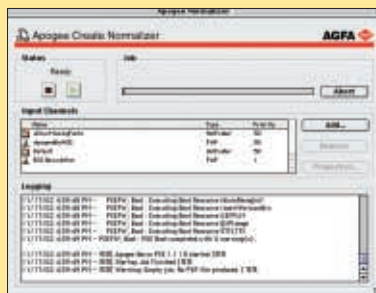
Using Seps2Comp and Apogee Create in a recomposite PDF workflow



This is a view of the magenta plate from the separated PDF test file. Note the solid color on the type.



This is the result using Apogee Create, viewed with Acrobat's Overprint Preview turned on.



(left) Agfa Apogee Create Normalizer interface;
(right) the location of the
Convert Separations to
Composite switch

CREO'S SEPS2COMP

There are two ways to take advantage of a PDF workflow and get the benefit of Quark trapping at the same time—and that's by rebuilding or layering the PDF.

Seps2Comp is an Acrobat plug-in which was originally written by Intense Software. It was the first to offer a way to recombine four individual CMYK pages into a single editable composite PDF. In theory, objects on each page or plate are compared and contrasted by Seps2Comp to create one truly "recomposed" file with XPress traps preserved. If prompted with the correct page color order, it manages spot colors as well.

I had tried version 1.0 of this software when it was introduced and tested it on a variety of separated PDFs. It was quite effective, except for two things—it was very slow, and it got tripped up by extremely complex artwork. The latest update v1.7.1 (trial version available from www.creo.com) is reasonably fast; nonetheless, recompositing could take quite some time.

THE SEPS2COMP TEST

Using a four-color two-sided brochure which I happened to be working on (8 1/2 x 14" folding to 8.5 x 7") as a test file, I created a separated PDF. The two sides generated eight single pages; each page identified its color in the bottom left corner of the Acrobat window. The plate order was CMYKCMYK.

The results of the Seps2Comp recombination were irregular. My first attempts didn't yield anything that was close to being visually correct. Subsequent attempts using different Preference set-

tings yielded better results, but now the colored type with QuarkXPress' drop shadows seemed swelled.

I opened the PDF of the manual and found the following: *Trapped PDF Files* Trapping poses a difficult problem when attempting to produce a composite file. The original shapes of objects may have been transformed differently from plate to plate, resulting in objects that no longer match each other. As a result, those objects will not be combined into a single object with a blended color in the composite file. Instead, the trapped objects will appear, with their proper tint, as separate objects drawn over each other. The overprint attributes are set so that when the file is re-separated and printed, the objects will produce the correct results on paper.

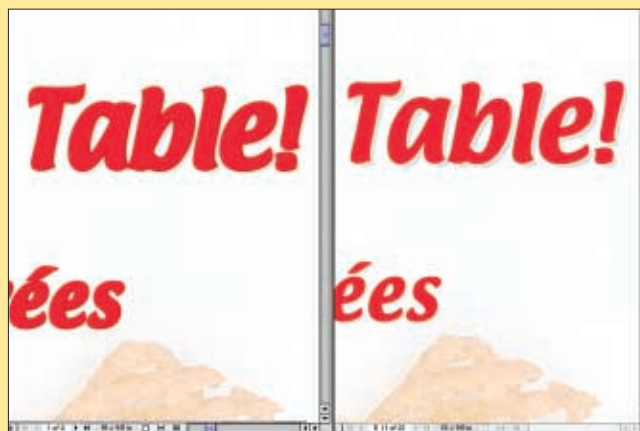
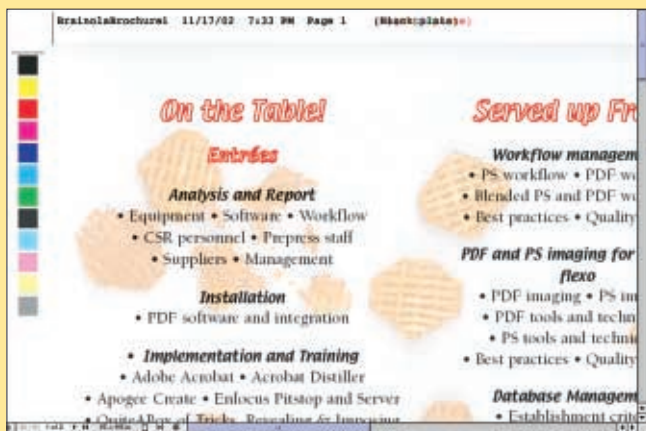
Not having a RIP on hand, I'll have to take Creo's word for it.

But to be entirely fair, Seps2Comp had to deal with a Quark-generated drop shadow printing on top of an image background; it works much better with simpler pages. I suppose it was just my luck that the first example I chose turned out to be so difficult.

In its favour, it took less than two minutes to deal with a reasonably complex job, so 30 minutes or less to process a 64-page magazine on my 400Mhz G4 would seem quite reasonable. I think this plug-in has a place in the recomposite workflow, although it may not be an appropriate choice in every case.

USING AGFA APOGEE CREATE NORMALIZER

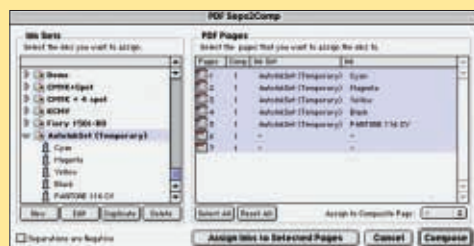
Agfa does recombination using its own Normalizer—Apogee Create. Create has had the ability to recombine CMYK plates into a



This is the result using Seps2Comp. It's wrong—an outline is not a solid.

(left) In the recomposited PDF of the test file, Seps2Comp looks close to correct, after checking off PS3 and choosing PS2, spot color plates not merged and Apply Transfer Functions to color values.

(right) Acrobat 5's Overprint Preview of the recomposited Apogee Create PDF. There's quite a difference in the look of the two composite PDFs and that difference is likely to make it to the finished job.



Creo's Seps2Comp analyzes the separated PDF and suggests an ink set to use, or sets may be created manually.

four-layer single page ever since its introduction; layers are colored with CMYK and set to overprint each other.

But a composite view of these overprinting layers was not possible with Acrobat 4.0. Instead, the only objects visible in the recombined PDF were those on the topmost black plate. What good was a PDF that you couldn't see?

Acrobat 5.0's Overprint Preview mode solved this problem. QuarkXPress trapping is preserved, and although there are a few significant differences, the result is a PDF that pretty much looks and acts like a regular PDF. Traps can be easily previewed at 1600% magnification.

However, this multi-layered PDF is bigger. Each layer has its own set of fonts. All the bits and pieces are stacked in a way that makes editing anything but the top plate (black) nearly impossible. And screen redraws are much slower as each color is written to the screen and overprinted.

SUMMARIZING THE OPTIONS

We have now reviewed two ways to recomposite separated PDFs. Creo offers a very calculation-intensive and relatively slow method but yields an editable recomposite PDF. Agfa performs the simpler task of layering each of the separate colors and tinting them appropriately. Neither choice is perfect for all jobs, but having access to both options would virtually guarantee control over every aspect of a PDF for prepress imaging.

And with the addition of Quite Revealing to either option, the need for 'comps' and 'seps' in the conventional customer/

CSR/printer workflow is eliminated since traps and separations can now be viewed by anyone on any desktop.

IS RECOMPOSITE PDF RIGHT FOR YOU?

Let's take a look at some examples of when using a recomposite PDF workflow would be right for your shop or studio (at least some of the time).

You might want to check your Quark trapping internally, just to remove surprises at the RIP. Or you might prefer Quark trapping in your documents and want to retain control of it no matter what job you send for imaging. Or you lack in-RIP trapping but need to generate trapped PDFs for client approvals. Or your RIP is capable of in-RIP separations but you don't like the way it handles certain kinds of jobs.

Recomposite PDFs also satisfy situations where your client wants to see trapping right on his own desktop. This workflow could be a good choice if you prefer a "digital master" approach so that files are always imaged using one standard format. Or perhaps you just don't have a separation utility for Acrobat.

Composite PDFs have been around for six years and will soon be the bulk imaging format for most printers and prepress shops. Now that trapping can be an integral part of the PDF workflow, isn't it time you took another look?

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