Welcome to Adobe Acrobat 5.0

Adobe Acrobat 5.0 represents Adobe's first major change to Acrobat since version 4.0 which appeared in February 1999. In the intervening two years, Adobe's PDF has emerged as a standardised mechanism for the transfer of final-form, for print documents. Adobe Acrobat 5.0 contains additional features designed specifically for the graphics arts/pre- press industry. This document has been created to help describe the changes in Acrobat 5.0.

Acrobat 5.0: The Application

Acrobat 5.0 is the application that was once called Acrobat Exchange. As at Acrobat 4.0, the base application is just called Acrobat. Acrobat over time has also been synonymous with a version of the Portable Document File (PDF) specification. Acrobat 3.0 implemented PDF 1.2, Acrobat 4.0 PDF 1.3 and Acrobat 5.0 PDF 1.4. The first major change in the application is support for **Transparency**. These changes are also reflected in the PDF 1.4 Specification.

Transparency & Overprint Preview.

Blending two objects into each other, or making one object see through in Adobe applications is more commonly termed **transparency**. Adobe Photoshop has featured blend modes since layers were added in Photoshop 3.0. Unlimited mixing vector and pixel based transparency for print related is a holy grail that first appeared with Adobe Illustrator 9.0.

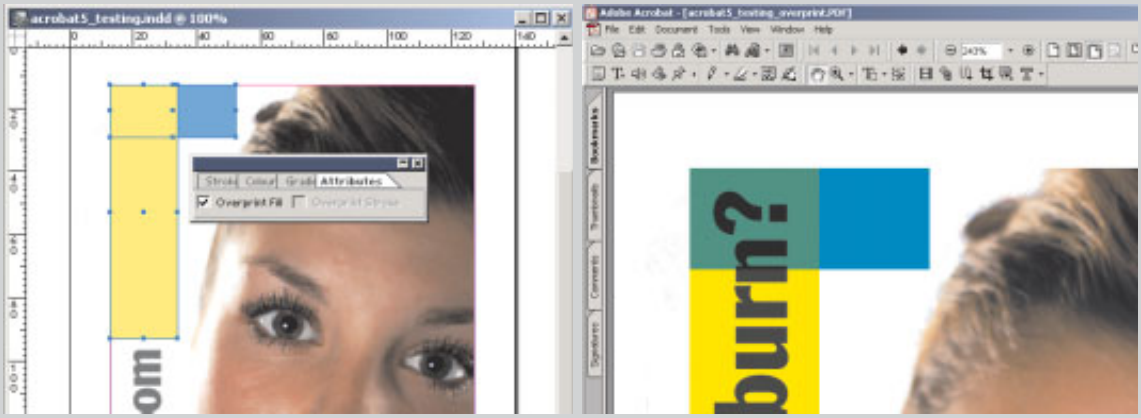

Figure 1: In the left hand image, Overprint Fill is specified in Adobe InDesign 1.5.2. Using the Export>PDF feature of InDesign, the image on the right displays the result with View>Overprint Preview turned on. The text is now visible and the yellow and cyan rectangles are mixing.

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Transparency as an addition to the PDF format first appeared in Illustrator 9.0. In the PDF, the transparency is **declared** rather than **premultiplied**. Premultiplied is a term that indicates that a transparency effect is created by an application such as Photoshop or via QuarkXpress a plugin, ShadowCaster. These applications 'burn in' the transparency effect into underlying pixels. These effects are permanent and unchangable. With declarative transparency, a description of the transparency (or Photoshop-like Blend mode) are described as a part of the PDF. For more information on transparency, please read the **Transparency White Paper** included with Illustrator 9.0 or the **Transparency in PDF** Technote (#5407)

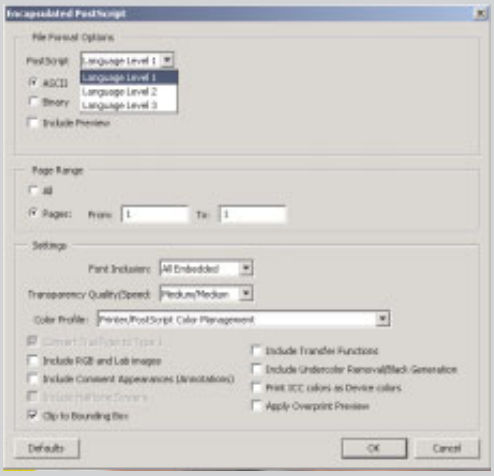
One of the side benefits of the new transparency features added to Acrobat 5.0 is the ability to live preview overprinting. (*see Figure 1*) The Overprint Preview also works with graphic objects placed over images.

As Postscript and EPS has no mechanism for representation and therefore printing the transparency expressed in PDF 1.4. Therefore when exporting a .ps or an .eps there is an option for 'flattening' the transparency. This will convert the declarative transparency into a composite: combination of raster (a picture) and vectors (shapes with colour changes) The visual output will match the original design.

Acrobat 5.0 Export & Batch Options

There is a change to the method of exporting Postscript files from Acrobat 5.0. Now the Export>Postscript or EPS is now "Save As>" and choosing Encapsulated Postscript or Postscript as the format. (*See Figure 2*)

In many, non-native PDF workflows there is still a need to convert from PDF into Encapsulated Postscript (EPS). For instance, some newspapers accept PDF as a



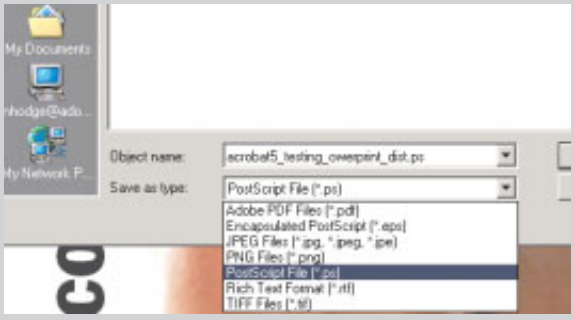


Figure 2: In the right hand Save As dialog box, both Postscript and EPS are supported output formats. The left hand image is of the Save As>EPS settings dialog box in Acrobat 5.0.

delivery mechanism for advertising. Newspaper publishing systems do not accept native PDF for placement, so EPSs need to be made of the supplied ads. Using the new Batch Processing feature of Acrobat 5.0, there is now a mechanism where a directory of PDFs can be converted into EPSs. (*See Figure 3*)

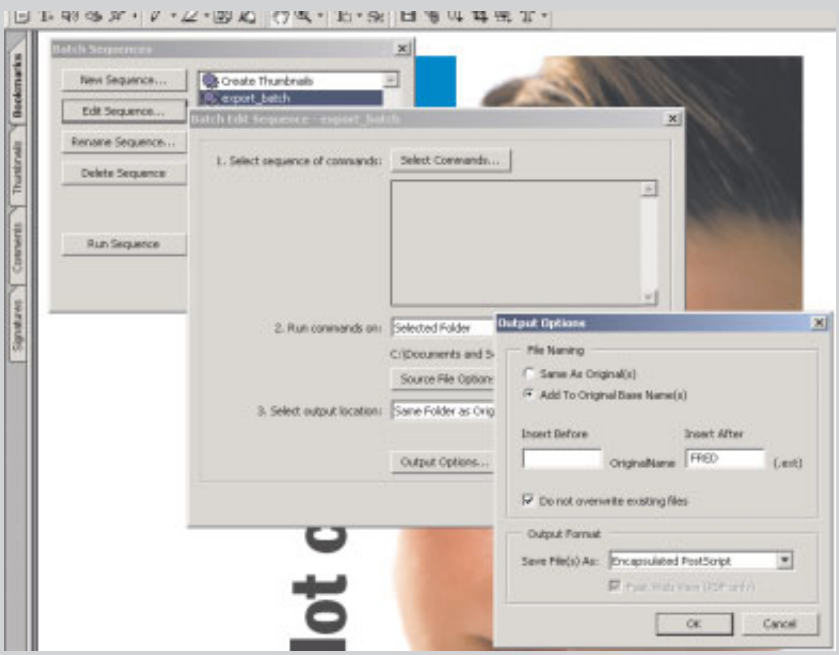
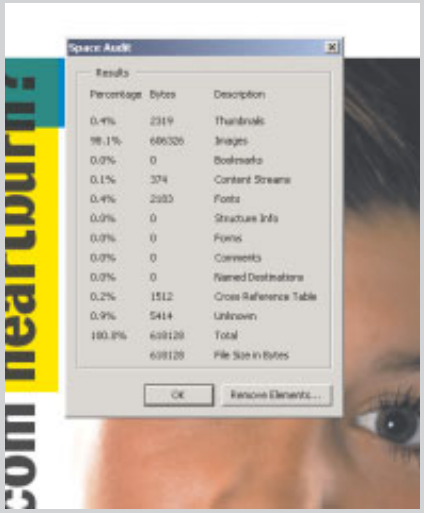


Figure 3: This series of dialog boxes depicts the Batch Processing facilities in Acrobat 5.0. As a part of the process, the final output can be Postscript (ps) or EPS (eps) files.
Other options in the processing of the batch can include cropping, rotating, optimising and running a series of Javascript commands.

Object touch up was added in Acrobat 4.0 - but not many people ever saw it used! It permits the latest stage changing of images and graphic elements inside a PDF. This is extremely useful when converting RGB images into CMYK using Photoshop as the engine. (*See Figure 4*)

Figure 4: The pop-menu to the left is the object touchup feature in Acrobat 5.0. If selected, this will open just the image inside of Photoshop, permitting late-stage image changes including colour mode changes.
The dialog box to the right shows the Tools>PDF Consultant>Audit Space Usage report for this single page PDF.



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Improved Security

An Adobe PDF file can contain either high resolution or low resolutions images. This flexibility permits the use of PDF for both web-based document presentation where file size is key, and for high-resolution delivery of documents such as advertisements where quality is key.

In complete digital enviroments, files can arrive or be sent anywhere in the world. The advent of digital music has improved the quality of the audio we listen to, and ease the distribution of copyrighted materials. PDF files, as they are digital files, are also easy to distribute. If you have a piece of work that you want to "lock down" to stop the printing or copying of sensitive data, Acrobat has a security mechanism.

Improved in Acrobat 5.0 is the ability to restrict not just if the document can be printed - but also the quality of printing. PDFs can now be limited to low quality printing unless the unlock password is known. This allows you to distribute high-quality PDFs knowing that they cannot be 'stolen' and printed at high quality elsewhere. (*See Figure 5)*

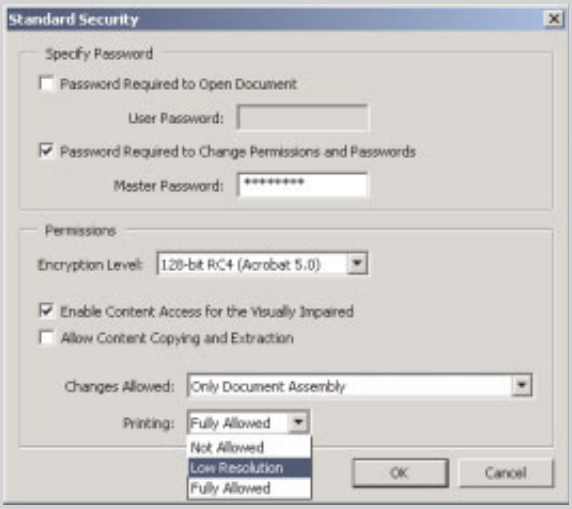


Figure 5: From the File>Document Security menu, the individual document's security settings can be controlled (a change from Acrobat 4.0) With 128-bit Acrobat 5.0 security, a new option is the quality of Printing permitted on a per-document basis. Printing can be disabled, or restricted to low quality only. Unless the Change permittions password is known, any recipient of this PDF will be unable to print at high resolution.

Using the Acrobat Distiller, these quality settings can be automatically added to all PDFs as they are created. The Batch Processing feature of Acrobat 5.0 permits the application of security settings to a collection of PDFs.

Improved Compression

Acrobat 4.0 improved support for documents that used Device-N colour. Duotone, Tritone and Multichannel colours were supported. One limitation was that the bitmap data in non-LAB, RGB or CMYK colour spaces were not compressed: resulting in large PDFs.

In Acrobat 5.0 Distiller, Device-N bitmaps are now compressed resulting in smaller files.

Distiller Preferences

The Acrobat Distiller no longer automatically overwrites PDFs of the same name at creation time. There is a preference both in the Distiller/Create Adobe PDF printer selection and the Distiller's inbuilt preferences. *(See Figure 6)*

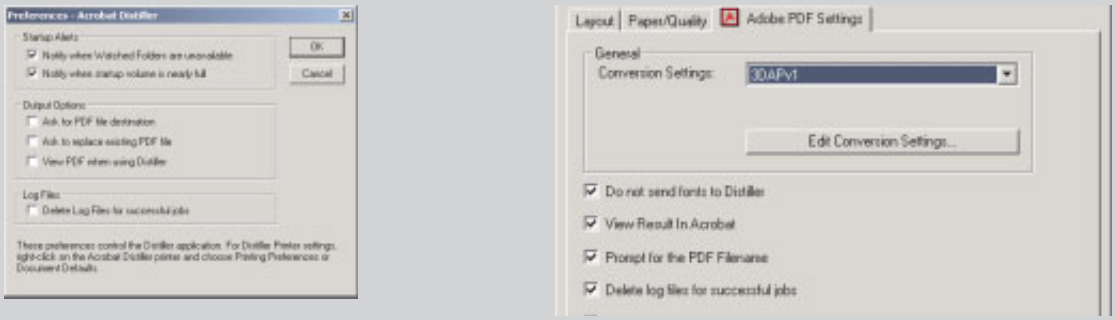


Figure 6: In the left hand Distiller 5.0 Preferences dialog box, you can now instruct the Distiller to overwrite existing PDFs at creation time. Previously, the Distiller would overwrite similarily named PDFs in the same directory if the incoming Postscript file was the same name.

Colour Management

In recent versions of Adobe applications, the colour management engine is being standardised to the cross-platform "ACE" engine. Based on ICC-colour profiles - the engine allows all Adobe application on MacOS and Windows to have consistent colour.

Acrobat 5.0 adds this engine, and provides finer control for colour management. Platform specific colour management engines are also available in Acrobat 5.0:. On MacOS ColorSync and on Windows 98/2000 ICM. In the Distiller section below, this same engine finds its way into Acrobat 5.0 Distiller, as detailed below.

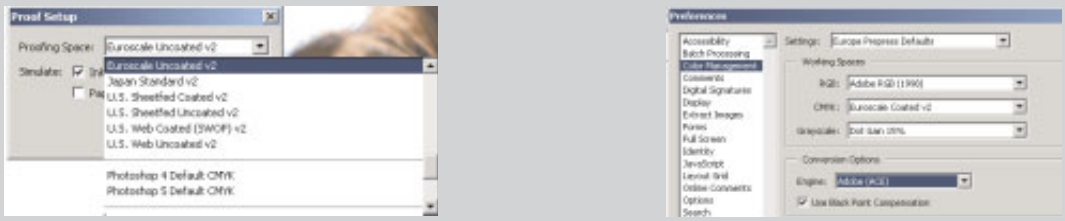


Figure 7: The Proof Setup dialog box permits viewing of the current PDF in the colour space as represented by the ICC profile select. Another, less technical description of this is "Soft Proofing". The Preferences>Colour Management options. Host-based colour management is possible with Acrobat 5.0 export and printing: that is, getting Acrobat to convert from CIE LAB/RGB to CMYK based on an ICC profile.

Acrobat 5.0 Distiller

The Acrobat Distiller is the workhorse of team in the pre-press world. It converts from Postscript and EPS into Adobe PDF. Firstly, any Distiller .joboptions files created in Acrobat 4.0x directly inside Acrobat 5.0 Distiller - there is no need to create a specific Acrobat 5.0 Distiller settings files.

For backwards compatibility, the Distiller can create PDF 1.2, 1.3 and 1.4 files - but with limitations inherit in the formats. As an example, you cannot create a PDF file of dimensions greater than 45 inches x 45 inches or transparency in PDF 1.2 (Acrobat 3.0). The Acrobat 5.0 Online help has a comprehensive list of features not supported by earlier PDF versions.

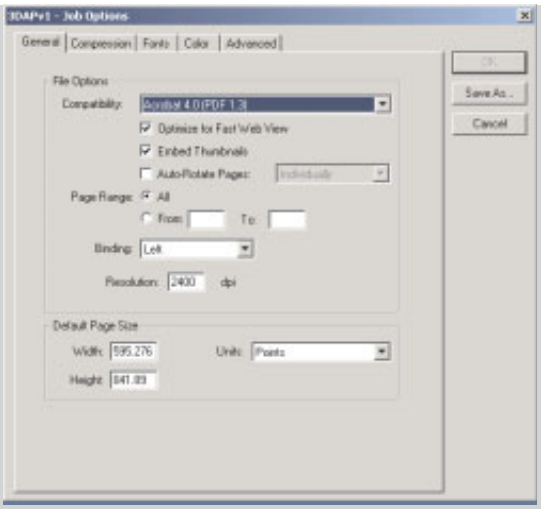
Also note that Postscript has not declarative transparency: Postscript from Illustrator 9.0 will have any transparent effects premultiplied/composited into the drawn objects. When distilling one of these Postscript files you may be distilling raster images where the flattener has created the transparent object.

Links & Resources

Ensure you reading the latest version of this document
http://www.nickhodge.com/
Transparency in PDF (Technote #5407)
http://partners.adobe.com/asn/developer/acrosdk/docs/PDF_Transparency.pdf
More Acrobat 5.0 Information on the Adobe Systems web site
http://www.adobe.com/products/acrobat/main.html
PlanetPDF
http://www.planetpdf.com/

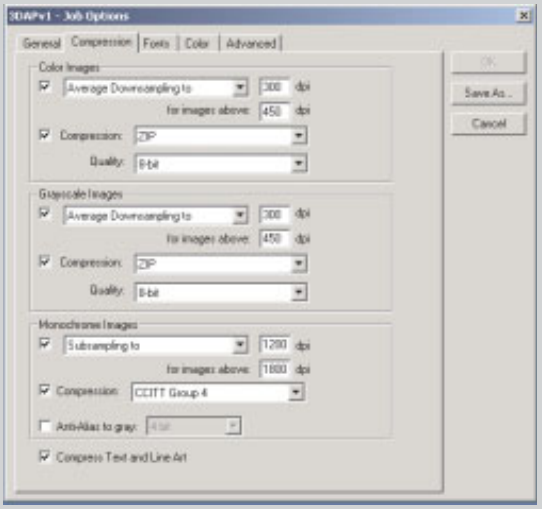
Thanks to

Michael Stoddart, Jordan Reizes



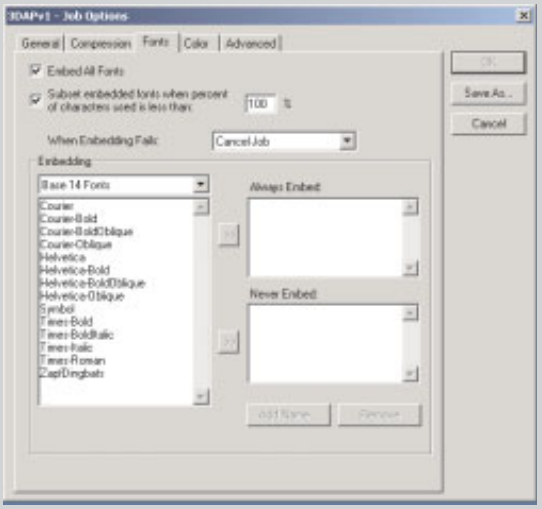
Distiller>Job Options>General

- Auto-Rotate Pages: depending on the content of the page, the Distiller will rotate the page orientation. This can also be triggered by comments inside the Postscript. Pages can be "unrotated" in Acrobat.
- Page range: instead of distilling all pages, a range of pages can be determined.
- Default page size has moved from the Advanced section. This refers to the page size an distilled EPS is rendered into. Normal Postscript from applications override this setting.



Distiller>Job Options>Compression

- Downsampling for images above: this was available in previous versions of the distiller, but the settings were invisible. This represents the threshold where only images above this DPI will be downsampled to the target DPI.
- Anti-alias monochrome images: permits the changing of images to greyscale and adding anti-aliasing to improve legibility.



Distiller>Job Options>Fonts

- no significant changes

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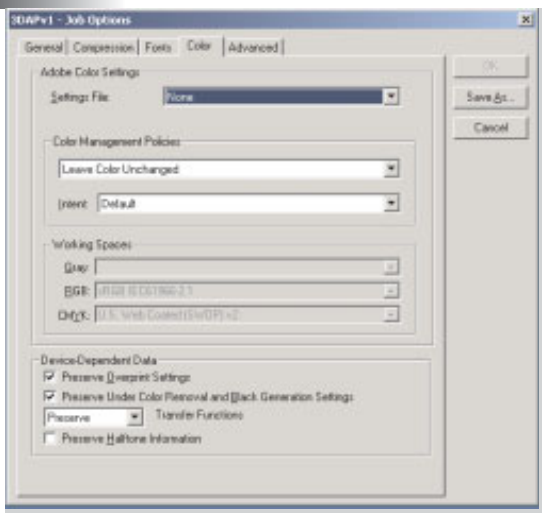
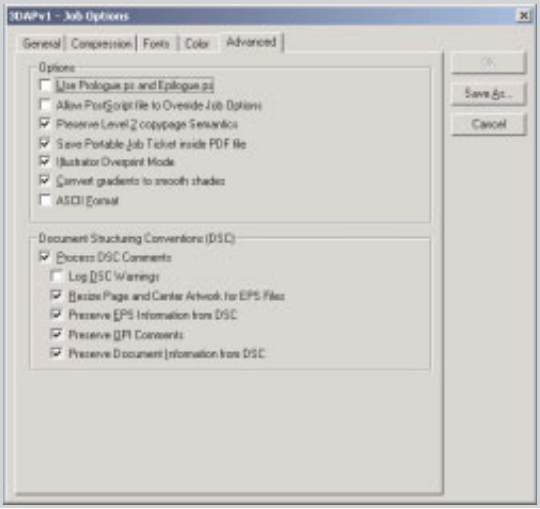


Distiller>Job Options>Color

- now Adobe standard colour management dialog
- can leave colour management off, or apply colour management to images only.
- apply transfer functions returns from Acrobat 3.0. Transfer functions as created in Photoshop will be applied to the image rather than described as a part of the PDF.



Distiller>Job Options>Advanced

- Illustrator Overprint mode preserves overprinting from Adobe Illustrator Postscript/EPS files
- ASCII format has moved from the General dialog.
- Convert Gradients to Smooth Shades: Distiller has extra smarts to detect and correctly convert gradients from applications including Freehand and Powerpoint to smooth PDF shades. In previous versions, in some instances, these were converted to bitmaps.