# Adobe Acrobat InProduction

There are now several ways to produce an Acrobat PDF document. The number of ways, combined with the number of user-determined settings, has resulted in the production of many PDF documents that are not suitable for their intended use, most notably in the realm of high-quality color printed output. In addition, PDF files are difficult or impossible to edit. To address this problem, Adobe introduced in the spring of 2000, Acrobat InProduction, a sophisticated toolset for print production.

The InProduction toolset forms the basis for a structured digital workflow that, when properly applied, can ensure the consistent and controllable production of PDF files for color print production. The toolset is comprised of five elements:

- Preflight (FIG. 1). The preflight tool performs the operation of interrogating a PDF file to ensure that it conforms to the production requirements established for the workflow. Files are checked against a standard or user-defined preflight profile, that finds differences which are likely to result in errors, and ultimately cause the job to fail. The result of the preflight process is the display of an error list, and an explanation of what each error means and how it can be corrected. Certain errors, such as improper font embedding can be corrected by the program, given that the required fonts are available on the system. In other cases the nature of the error can be fatal, such as the presence of low resolution images. The only recourse is the generation of a new PDF file from its source application. Users can try the preflight process on-line at http://preflightpdf.adobe.com/.

- Separator (FIG. 2). The separator tool provides the means to preview how color separations will be produced in the output device RIP. Users can intelligently map spot colors to process colors or to other spot colors in order to reduce the number of required plates.
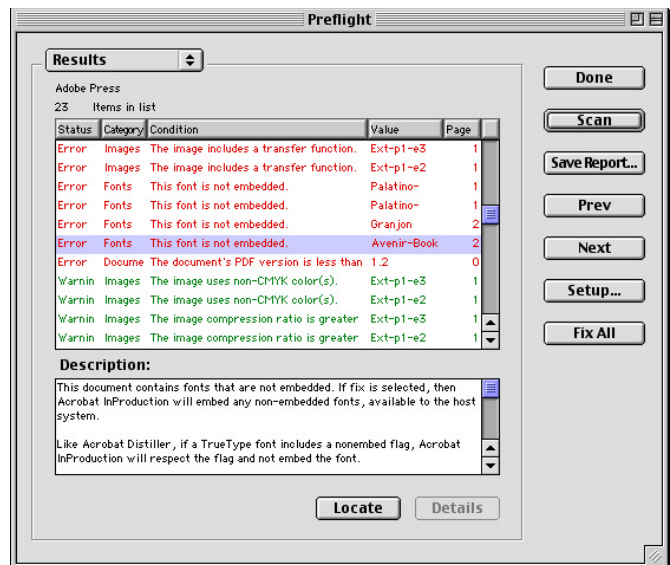


*FIG. 1: The results of the Preflight process. Certain types of errors can be corrected by using the "Fix All" button.*
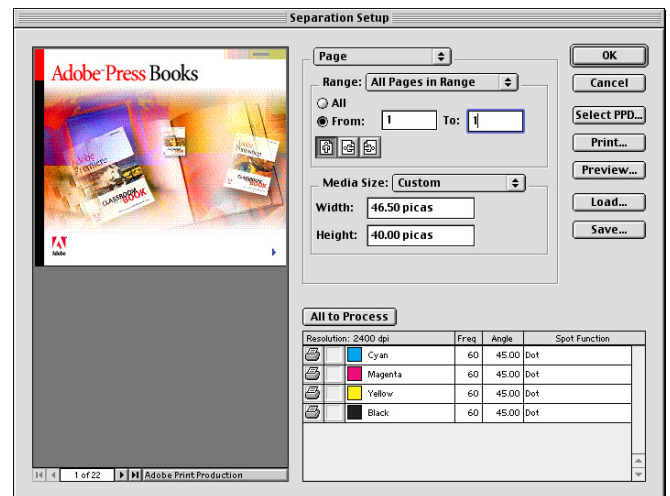


*FIG. 2: The Separation Setup dialog box.*

- Trim/Bleed (FIG. 3). The trim/bleed/art tools are used to define boxes on the PDF page that will comprise a trim, bleed, or art area. The specification is to within 1/1000 of an inch.

  Trim box. The definition of the trim size, which can be set to override application-defined settings, is important to specify if the PDF file will be imported into InDesign or an imposition program. The trim size is contained within the page size and allows for the inclusion of printers marks and control devices.
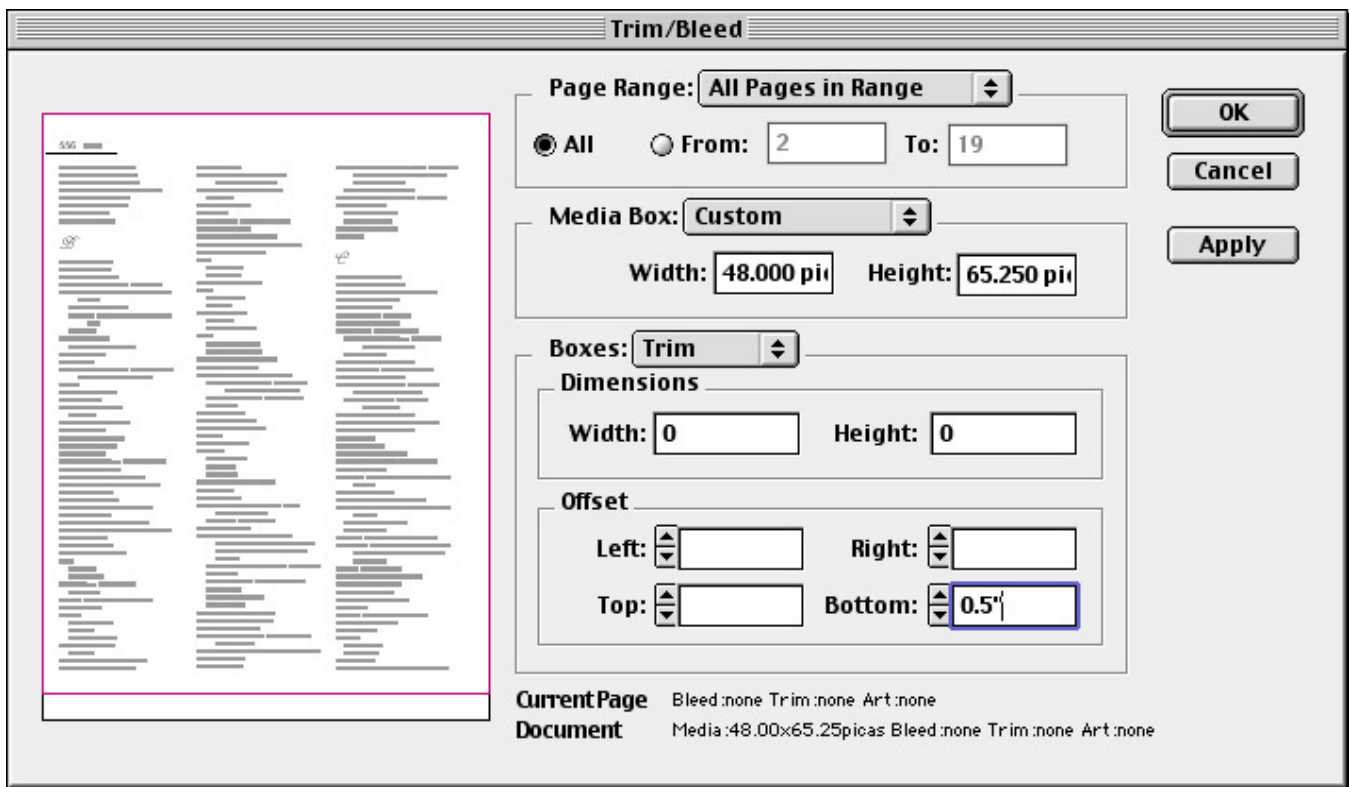  Art box. An art box is drawn around a graphic image to create a clipping path.

FIG. 3: The Adobe Acrobat Trim/Bleed dialog box.

When a PDF page containing an art box is imported into InDesign, only the contents of the art box is placed, the rest of the page is ignored.

Media box. The media box determines the dimenions of the document. Pages that will be produced with a finished size of 8.5 x 11 inches, for example, require space along the edges for printer's marks and control devices. The page could be redefined to a media box of 9 x 12 inches to accommodate that need. All of these box dimensions can be previewed on the screen.

• Color Converter (FIG. 4). The color converter tool uses industry-standard ICC color profiles to convert LAB, RGB or CMYK into CMYK. The user can also tag or untag CMYK images with the necessary ICC profiles for a given output device.

• Adobe in-RIP Trapping (FIG. 5). The trapping tool allows the user to specify the trapping specifications for individual pages and regions for jobs that will be output on devices driven by an Adobe PostScript 3 RIP that uses Adobe in-RIP Trapping.
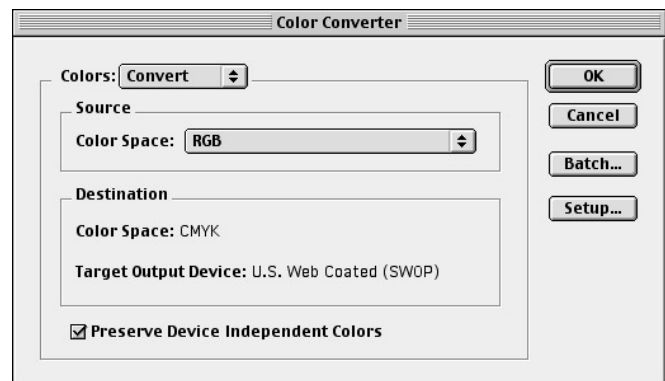


FIG. 4: In the Color Converter dialog box the user specifies the target output color space.

The InProduction tool does not perform the trapping, it merely sets the trapping parameters that will be applied during the ripping process.

**InProduction Workflow.** The use of PDF files in print production workflows has become a standard occurrence, and has been legitimized by the acceptance of the PDF/X-1 industry standard, which was developed by the Committee on Graphic Arts Technical Standards (CGATs) and adopted by the Digital Delivery of Advertising for Publication (DDAP) as the standard method for digital ad submission.
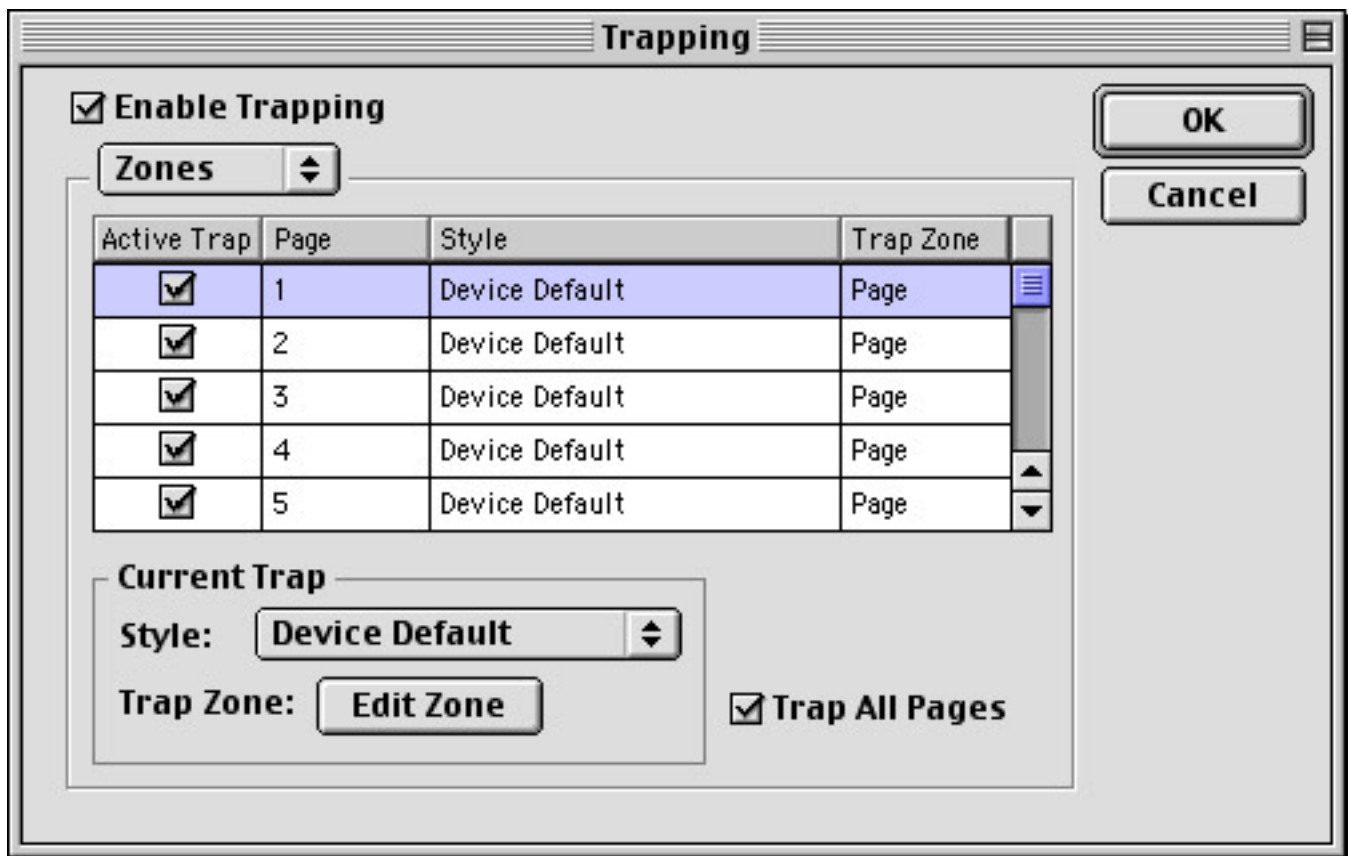
*FIG. 5: The Trapping dialog box.*

The InProduction workflow is defined by Adobe to occur in the following order:

1. Preflight. Digital workflows must incorporate an inspection or preflight step early in the prepress process to ensure that the PDF file has been properly composed, and that it will not require costly and time-consuming correction later in the production cycle. InProduction preflight profiles are applied for this purpose, and can be shared with others to maintain consistency. The creation of a profile consists of selecting from a long categorized list (Document, Pages, Fonts, Images, Colors and Output) those things that need to be inspected in the file, and how their detection is to be handled (Ignore, Note, Warning or Error). Adobe maintains a registry of company preflight profiles at http://preflightpdf.adobe.com/ cgi-dirpublic.pl. The result of the preflight process is a detailed report that can be shared with the PDF producer to help him or her understand how to produce compliant files.

PDF files that do not pass preflight must be corrected, or possibly recreated. Newly recomposed files are sent through preflight and the process continues until all fatal errors have been eliminated.

2. Preview color separations (FIG. 6). InProduction provides the same CMYK preview capability that is present in Adobe Photoshop.

3. Add trim/bleed settings, art boxes, and printer's marks. In this step the user specifies the precise position of the page image and the boundaries that will accommodate any bleeds, printer's marks, and control devices. These settings may have been ignored during the creation of the PDF, and would be difficult or impossible to add after the fact without InProduction.

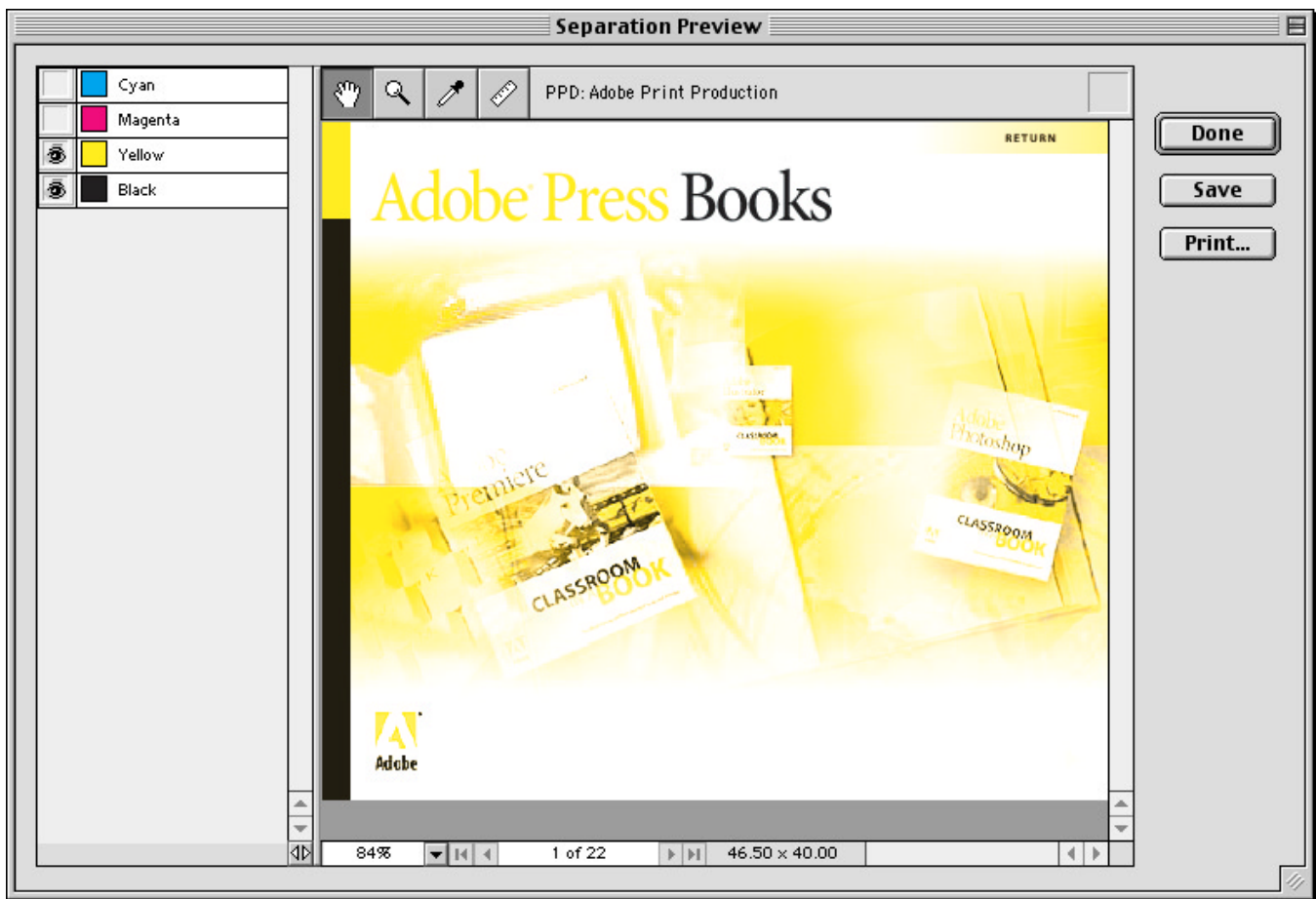4. Convert colors to CMYK. Designers often forget or ignore the restrictions on color

*FIG. 6: The separation preview for the yellow and black plates.*

reproduction that are either imposed by the nature of the output device, or by the economics of the given job. The result is that PDF files often consist of full color images as well as several spot colors. It is the prepress technologist who is forced to make the job comply with the realities of the graphic reproduction process, and can do so using InProduction's color conversion tools.

5. Define in-RIP trapping. InProduction provides control over trapping both complete pages and page regions. The trapping rectangle and trapping polygon tools are used to draw the trap regions directly on a page. Controls are provided for applying trapping on a page-by-page basis.

6. Output a print-compliant PDF. The result of the use of the InProduction toolset is the generation of a PDF file that is highly likely to output on an imagesetter without errors. The value of such a file is great, since making corrections at a late stage (or the final stage) in production is very expensive, time-consuming, and aggravating.