



## Production Page: In Praise of Preflighting

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Most everyone who has ever created files for publishing has horror stories about the job that wouldn't print. No matter how thoroughly you check every file and font related to a project, you can still have one component with the wrong image resolution, the wrong color space, or a missing font.

Such a file will inevitably result in that midnight phone call from the printer or prepress house requesting immediate delivery of a new file. Missed deadlines and added costs are just a few of the possible consequences of bad files. Fortunately, preflight software can help by analyzing printing jobs before they get too far into the print production cycle.

What is preflighting? In the production world, it refers to the process of analyzing native digital files before inserting them into a prepress work flow. This ensures that the files are ready for their intended purpose. The term "preflight" goes back to the early days of the airline industry and refers to the time spent in the cockpit making sure all of the controls and gauges and backup systems are working correctly — *before* the plane is in the air.

Of course, catalog production accuracy isn't a matter of life and death the way aircraft safety is, but the earlier you can identify and correct potential printing and production problems, the less expensive the fix will be. If a job gets all the way to press before a problem is discovered, you'll have to pay for additional press time, plates, and prepress work. Worse yet, everything you have already spent time and money on in those steps has to be thrown away.

### Preflight past and present

A few preflight software providers got their start making high-end production tools for PostScript file creation and editing. These products were generally used in the production area rather than on the desktops of designers and buyers. In the past few years, however, that has started to change.

Enfocus Software (which purchased Acquired Knowledge's PostScript editing program Download Mechanic) and Agfa — both based in Belgium — have both turned primarily to working with PDF files.

Agfa's Apogee Create software and Enfocus's PitStop products have quickly become industry standards for creating good PDF files on the designer's desktop. These products are designed to lock the users into using appropriate file types and resolutions for print production.

While PDF has become increasingly important in print production, most front-end users still rely on native applications for file delivery. The two primary products for such applications are Preflight Collect Pro and Preflight Pro from Portland, OR-based Extensis, and FlightCheck Classic and FlightCheck Collect from Santa Ana, CA-based MarkzWare. These are written with the designer in mind. They work on the designer's platform, taking the "collect for output" features of some page layout programs a few steps further.

The programs not only gather all the document contents, including all images and fonts, together into one folder to deliver to the printer, but they also examine various file characteristics to make sure they are the proper size, format, resolution, and so on to print properly. The key to using such products effectively lies in the "ground controls," or how the user sets up the nitty-gritty criteria by which the software decides what is "acceptable" and what is not.

### Ground control to Major Tom

Ground controls are important to preflight success for several reasons. For one, some printers use older raster image processors (RIPs), the data crunching hardware/software for creating the final film or plates, which can get bogged down when rotating and resizing images.

Or printers might use PostScript Level 2 devices that have trouble converting certain file types such as JPEG images on the fly. A few service bureaus may accept images as RGB (red/green/blue), while most will accept only CMYK (cyan/magenta/yellow/black) images for print production.

Stylized fonts (typefaces for which the designer has used the computer's "bold" and "italic" keyboard commands rather than the actual "bold" or "italic" font) can also wreak havoc on PostScript devices. Ground controls set the criteria for all of these factors and many more. Hundreds of variables can be set up in the software so that the file delivered by the designer or cataloger will match the equipment and software used to produce film and plates.

This means the catalog designer must work directly with the printer. Since many prepress houses use a preflight product, they will likely be able to provide you with a set of controls that fit their specific work flow.

While it may not be the height of convenience to assemble every printer's ground-control criteria, getting the information entered into the program is a no-brainer. Once it is set up, the user can simply select the printer or prepress house that will be receiving the job and drop the master Quark or PageMaker (or now InDesign 2.0) file onto the preflight program icon on the desktop. As long as the printer that supplied the ground controls is the same printer doing the job, the job should print correctly.

Of course, nothing is perfect, and you can still encounter disk corruption and other issues. But preflight software ensures the integrity and completeness of the job. And with the rise of the submission of files via the Internet and FTP sites, preflight software vendors have formed alliances with third-party service providers to combine the ease of use of the Internet with the security of preflight tools. Several companies such as GoodtoGo, Myfujifilm.com, Proof-it-on-Line, Printable.com, and PrintCafe offer drag-and-drop file submission and preflight checking along with secure file delivery.

### Choosing a system

Whether a stand-alone product, a simple "collect for output" utility, or an Internet-based solution would best serve your needs depends largely on how deeply you are involved in the production process — and how much you want or need to know about it. The placement and use of preflight software also depends on where the responsibility for file integrity lies.

To help clarify what method of preflight is right for you, start with an analysis of your print vendors' capabilities and preferences. A few printers and service bureaus will not only recommend a specific product that fits their production work flow, but they may even purchase the product for you. Several companies we have talked to believe purchasing preflight software and setting up ground controls for the designers and purchasing agents supplying them files is money well spent.

Of course, it is possible to do preflight without special software if your printing knowledge is sophisticated — and if the lines of communications between designer, buyer, and production plant are always open. A phone call to the prepress supervisor at the beginning of a new relationship can start things off on the right foot.

You should ask the person at the prepress house who will actually be dealing with your files what to watch out for, and let him know that you want to hear about any problems he may have with any files. This point cannot be stressed enough: The time to fix files is before they arrive at the printer.

### Ready for takeoff

The truth is, when the printer or service bureau gets a job and runs it through preflight software, it is really "postflight." Preflight product providers use the term to describe the process of analyzing processed files (PostScript, PDF, DCS2, and whatnot) for quality control in a digital prepress work flow.

Either way, if printers must spend time fixing your files, they will probably charge you for their time. Catching problems at the source is the best-case scenario, and preflight software enables you to do this in a relatively automated way. And if nothing else, preflight software may help you get home a little earlier and sleep a little better.

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### **The Flight Path of a Software Provider**

In developing his FlightCheck software product in the early '90s, MarkzWare cofounder Patrick Marchese figured it made perfect sense to have the computer do the work. After all, the basic information was contained within all the graphics files. Embedded within all that computer code was the information necessary to check the integrity of the file. The key was to extract that information, put it in some logical order, and cross-check the data with known parameters. Of course all this needed to be done automatically.

The problems with putting together such a program were many. First, graphics software is constantly evolving and changing. Second, different graphics output applications require different sets of rules. Websites are perfectly content with low-res RGB images, while commercially printed pieces require hi-res images, and most printers prefer CMYK. In the early days of digital prepress, rotating images could cause serious processing slowdowns, and therefore printers wanted rotated images flagged, if not forbidden. And different RIPs accept different types of compression, image swapping protocols (OPI, APR, etc.), and image formats (CT, EPS, TIFF, and so on).

With a couple of years of development, the programming skills of partner Ron Crandall, and many comments from beta-testers, Marchese unveiled the first release version of his FlightCheck software at the 1995 Seybold Conference in San Francisco. Ideally, Marchese says, he would like to put the preflight software right in the heart of the computer operating system: "It would make it easier on a company like ours, where we're reverse-engineering file formats — we could do it from the start."

While such OS integration is not likely any time soon, the idea makes sense. The more the file creation process can be integrated with the print production process, the more trouble-free everyone's life will be. For now, preflighting tools hold the key to making sure the process works at every step down the production line.— *SB*

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