

The Ultimate PDF/X Guide

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Ultimate PDF/X Guide

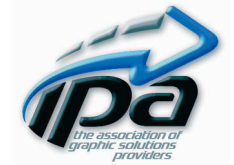
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The Ultimate PDF/X Guide

in collaboration with:



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About this PDF Guide

Whether you create or receive PDF documents, you want them to be ready for output right away. You want to prevent any problem which may disturb the workflow. You can do this by using the PDF/X standards and the PDF creation, editing and preflight software.

Even though these software are powerful and sophisticated, errors or inconsistencies may still occur in the PDF documents. And of course you want to find and resolve these problems in the blink of an eye. You also want to know the cause and the solution of these problems, so that you can prevent them in the future. To this end, you will find this Ultimate PDF/X Guide a useful work of reference.

Purpose and structure of this PDF/X Guide

This Ultimate PDF/X Guide aims to help you to apply the PDF/X standards when you are creating or receiving PDF documents. When you submit your PDF documents to a preflight check, you will obtain a list of (potential) problems, presented in a preflight report. The error messages in this preflight report are the starting point for this Ultimate PDF/X Guide. All the error messages which may appear in a preflight report are described in this Ultimate PDF/X Guide, together with their possible cause(s) and tips how to resolve them. Some detected errors in the PDF document are automatically corrected by the profiles available in many of the software solutions presented here. In those cases, you will find a description of the problems that have been resolved.

You can easily find a description of a given problem by means of the quick-find lists. These lists present an overview of all the errors and cautions, sorted by profile with a reference to the page in this Ultimate PDF/X Guide where the problem is described in detail.

You can find these quick-find lists in [“Part 5: Description of the Errors and Cautions in the PDF Reports”](#) on page 127.

When you have found the cause of and the solution to a problem, you undoubtedly want to prevent that problem in the future. You can easily do so as a PDF document provider, but also as a PDF document recipient: you can use the preflight report to discuss problems, if any, with your suppliers. Or you can prevent problems with PDF document by using the software products described in this PDF/X Guide.

The following parts provide background information about the PDF/X-1a standards and deal with the technologies on which the standards are based:

- [“Why PDF/X?”](#) on page 11
- [“Part 3: Enfocus Software PDF/X Solutions”](#) on page 65

Online versions

You can also find more information on the PDF/X standards on the IPA Web site:
www.ipa.org/publications/pdfx.php3.

Preface

Welcome to the Ultimate PDF/X Guide. This guide was produced to address the needs of the publishing industry as it begins to embrace the new PDF/X standards. As you will see, there is a lot of information included in this book to inform you of what the standards are, how they can be used, and what is required beyond the PDF/X standards to achieve a successful print production project. In addition there is a very comprehensive section on preflight errors which explains the various problems that can be introduced to PDF/X workflows.

We have also included information on all of the currently available PDF/X software solutions to allow you to see the many options that are available as you begin your adoption of PDF/X workflows. As you read through the book you may notice that the Enfocus Software section may seem large in comparison to some of the other solutions. While this section may seem comparatively large... they earned it. This book may not have been possible without the generous content and production support of Enfocus Software. However, even in this section you will find valuable information that will assist you in the successful creation of PDF/X files with 'non'-Enfocus Software solutions.

The sponsoring organizations trust that this book, along with the many other PDF/X resources that are referenced, or become available will be valuable tools in your daily production. And while we hope that the information in this guide will lead you to success, in no way do the sponsoring organizations endorse any of the products in this guide, we only offer them as a representation of the many PDF/X solutions that are currently available.

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Why PDF/X?

When people first started looking at using Acrobat and PDF for work in the graphic arts it seemed that everyone was blown away by the possibilities of the new format. It had the potential to be so much more robust and predictable than PostScript that it was easy to be blind to its real-world shortcomings. Many pundits said, for instance, that it was so wonderful that you wouldn't even have to pre-flight PDF files.

Well, we're all a little older, and a little wiser now, and I don't think any of us are quite so likely to grab on to the possibilities of a new file format without also asking about the down-side. At the same time, PDF itself is a little older, and a much wiser choice for pre-press work than it was way back when people started thinking about using it. A lot more functionality for print work has been added over the years.

As graphic arts professionals it's easy to miss one important issue, however, and that is that our industry is only a small fish in the PDF and Acrobat pond. Adobe created PDF for the corporate market, not for us. The single largest user of Acrobat is the IRS, with a mind-blowing 350 thousand seats of the full Acrobat product. The logic for a software vendor like Adobe is obvious – pre-press will never match the potential for Acrobat sales that the corporate market can.

We're therefore fortunate that the requirements of professional graphic arts can be accommodated with some relatively small additions beyond those for the corporate sector.

There are those who would say that we're even more fortunate that a single file format, designed for one industry and adapted for a second ends up perfectly positioned to allow the same format to be used for cross media publishing. You can design a piece with any software and have it displayed, archived, searched or printed just about anywhere ...

It's at about this point, of course, that many of you will be scratching your heads and wondering about my sanity.

Sure, I can make a PDF file and put it on my web site, or e-mail it to my clients for approval, or send it as a digital ad for printing in Vogue. Sure, the same file can be viewed on my beautifully calibrated monitor in a dim, gray room, as well as on my (uncalibrated) PC at home, and even on my hand-held ...

But does it make sense to use exactly the same file in all those places, for all those things?

Of course it doesn't.

When creating a file for placing on the web I'm likely to spend some considerable time figuring out how to make it as small as I can, and how to ensure that it will view well on everyone's computers, even if they've only got an old version of Acrobat Reader. Images are likely to be saved in RGB, at least partly to reduce the file size.

When creating a file to be sent as a digital ad to a glossy magazine I want to be sure that the proof I made before shipping the file can be as good a prediction of the final printed piece as possible; you can buy an awful lot of pre-press time and equipment for the cost of just one bad ad. At the moment, I'll therefore probably want to handle my own separation to CMYK so I can tune it for the particular images in the ad, and I may well want to do my own trapping too.

Perhaps more importantly, I also want to be very careful to make sure that the publisher will read my file, and plate it exactly as I saw it on my proof.

A document stored on a corporate intranet for viewing by many people throughout an organization may be accessed with several versions of viewing applications. The information in the file is typically more important than the presentation, so it makes sense for the viewer to do the best it can to display those parts of the file that it understands, and not to worry the user too much about those parts it cannot. Thus Acrobat 3 will often display a PDF version 1.4 file without any warnings or errors (Acrobat 3 was designed for PDF version 1.2, Acrobat 5 was designed for PDF 1.4). Unfortunately, that display may be incorrect – although it still carries most of the information, the presentation may be hopelessly wrong.

But if that makes sense for the corporate sector, it certainly does not make sense in the graphic arts. For the pre-press house or printer, the information conveyed by a printed piece has pretty much no value, they are paid to make it look right – presentation is everything.

It's perfectly possible to develop a workflow for cross-media publishing that includes a single master for all output routes, including web, e-mail, hand-helds and print. That master can be 'purposed' to one version of the file for placing on the web, another for print, and others for other delivery mechanisms. Much of the time it makes sense to do that “purposing” before transmitting the file to a publisher or printer to minimize the possibility of error, and to maximize your ability to predict and control the look of the final printed piece.

It was exactly this kind of thinking that led two user organizations involved intimately with digital ad delivery to propose that a standard should be developed. Thus DDAP and NAA approached the US standards bodies with a request for a standard based on PDF, specifically for data exchange in the print industry. (See below for notes on acronyms).

As the body responsible for graphic arts standards in the USA, CGATS agreed with the request, but decided very rapidly that such a standard must be designed with the whole of the print industry in mind, not just digital ad delivery. After all, the same requirement for a pre-transmission proof being an accurate prediction of the final printed piece applies across almost all jobs, as does the high cost of printing something wrong.

And so began the work that led to ISO standard 15930-1:2001, which includes PDF/X-1a.

This is both a file format specification and an application standard. It defines what you can or must include in a file; all fonts used in the file must be embedded, for instance. It also defines how a pre-press tool reading the file must render it; for example, the embedded fonts must be used rather than fonts previously installed onto a RIP.

A standard like this has many advantages over other commonly used approaches to making job delivery reliable and robust. It's an open specification that any vendor can implement without license fees, which means that you can use it whatever tools you have for making or pre-flighting PDF files.

As a file format it's a strict subset of the baseline PDF specification, which means that any PDF viewer can open and display a PDF/X-1a file. Any PDF production workflow can also process PDF/X-1a files, but remember that part of the benefit of PDF/X-1a is in ensuring that a file will be rendered in the same way by every system – processing a file through a workflow that is not PDF/X-1a compliant runs the risk of output that does not match.

Although only published in December 2001, PDF/X-1a has already been implemented in a number of file conversion and pre-flight tools. Many more are in development, including pre-press workflows tailored explicitly to make compliant proofing and output as easy as possible.

In the longer term even wider availability of cheap creation and validation tools, including direct export to PDF/X-1a from design applications is likely. Even with the tools available today PDF/X-1a can reduce the cost of customer education and increase the proportion of good files that your less sophisticated clients supply to you. Instead of supplying Acrobat Distiller job options files, or ground controls for pre-flight tools, just say “send me a PDF/X-1a file, prepared for SWOP”. You won't have to fight to work out the best settings in every version of every application, and there are many free resources available on the web showing how PDF/X-1a files can be created, such as those at www.ddap.org.

Note that comment above – “a PDF/X-1a file, prepared for SWOP”. Just asking for PDF/X-1a is enough to ensure that you'll get a file that can be printed reliably, but is not enough to ensure that it will give a high quality result.

You can think of three layers of requirements. The first is applicable for all jobs in the graphic arts industry – it is to ensure that a file can pass through a pre-press installation without errors. The second is to provide a file that will print with appropriate quality for a specific industry sector and printing process. For publication printing in North America, for instance, that would mean using SWOP, implying a nominal 133 lpi screen, with specified ink colors and dot gain, which in turn implies that CT scans should normally be saved at between 200 and 270 pixels per inch. The third and final layer of requirements is for a specific job or publication and includes trim sizes and bleed, the precise resolution to be used for LW scans etc.

The PDF/X standard is aimed at the first of these layers, applicable to the whole print industry. A number of trade organizations and industry associations are considering developing specifications that build on PDF/X-1a that would be applicable for their precise market sector, although an individual user could easily develop one as well. The third layer of specification can only be supplied by the publisher or designer of a job, in conjunction with their printer – nobody else can define the appropriate trim size, for instance.

Providing a solid foundation for second and third level specifications is a major advantage of PDF/X. The user developing such a specification does not need to understand all the internal technicalities of PDF files and pre-press processing. As pre-flight tools appear with a single option that allows verification of PDF/X compliance, it also becomes easy to test a file against such a specification.

Of course, the print industry does not stand still, and there's increasing interest in evaluating color managed workflows as an alternative to supplying jobs pre-separated to the printer. This is especially true for larger printers and publishers, where a client may pass on the responsibility for cross-media publishing of a piece further down the workflow.

Color managed workflows are also very relevant for jobs printed on a digital press because there is no established color standard like SWOP for such devices – one set of CMYK values can look quite different on different presses. That means that I can't prepare a file in CMYK if I care about color accuracy unless I know some details about the press it will be run on. If I send a job in sRGB, however, output from a wide variety of presses will probably look quite similar.

With this in mind there has been work underway to produce a second standard called PDF/X-3 that will allow color managed data to be included in the file. The standard was approved in Spring 2002 and is expected to be published later the same year.

The nuts and bolts of alphabet soup

ANSI – American National Standards Institute. The organization responsible for national standards in the USA.

CGATS – Committee for Graphic Arts Technical Standards. The organization tasked with creating standards for the graphic arts industry in the USA by ANSI.

NPES – Association for Suppliers of Printing, Publishing, and Converting Technologies. The organization supports and administers CGATS activities, and represents manufacturers, importers and distributors of equipment, supplies, systems and software used in every printing, publishing and converting process from design to distribution.

DDAP – Digital Delivery of Advertising for Publication. An association of ad agencies, pre-press companies, publishers, printers and their vendors devoted to increasing digital delivery of advertising material for magazines.

ISO – International Standards Organization. One of the bodies responsible for development of international standards.

NAA – Newspaper Association of America. An association of newspaper publishers and printers and their vendors devoted to improving newspaper production in North America.

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Part 1: A Word From The Sponsor Organizations

Introduction

This Ultimate PDF/X Guide was realized with the sponsorship of some of the major organizations in the prepress and graphic industries. In the next few pages, each organization presents its own view on the importance of the PDF/X standards.

Topics

This part contains forewords from the following organizations:

- ["IPA"](#) on page 18, by the International Prepress Association
- ["DDAP Association"](#) on page 20, by the Digital Delivery of Advertising for Publication Association.
- ["dMACS"](#) on page 21, by the Digital Magazine Advertising Canadian Specifications.
- ["GASAA"](#) on page 23, by the Graphic Arts Services Association of Australia.
- ["Time Inc."](#) on page 24, by Time Inc.

The Association of Graphic Solutions Providers

IPA members have historically been on the leading edge of technology and have continually focused on developing effective processes and workflows to ensure success for their customers and for themselves. In the last decade of the 20th century, electronic prepress opened new doors of opportunities but also brought with it new problems, including the exchange of digital files.



IPA and its members have played a key role in solving these problems. After much trial and error, the industry finally settled on TIFF/IT as the most reliable file exchange format for graphic arts applications. It has and will continue to serve the industry well because it represents fixed, predictable files, however, it is restricted to raster data, which is not practical for smaller advertisers or publications. In addition, raster pages are rather useless for archival and cross-media purposes.

PDF has now found its way into professional publishing as a way to distribute files for output production. However, PDF alone does not provide the level of reliability required by graphic communication firms. IPA members have joined forces with other industry leaders in pursuing the possibilities, which has led to the development of PDF/X-1a and PDF/X-3.

These formats address many of the requirements of a print production workflow. They ensure that the PDF file has all of the fonts, has no moving images, etc. By design, it also leaves a certain amount of flexibility to allow for the differences so each production environment can be addressed individually.

Realizing the potential of PDF/X, IPA members are developing workflows that will allow them to leverage files for re-purposing and re-publishing in a multi-channel environment. A PDF/X workflow allows them to create and process files that will spell success for their companies and for their clients.

IPA believes that supporting this standard initiative is important and we are proud to be able to help bring this important resource to the industry.

DDAP Association



The pressures of business today call for jobs to be available on shorter deadlines, but with the levels of quality and accuracy that were expected in the past. By the same token, the applications used to create these files have become more complex and, with that complexity, more error prone in terms of interpretation and construction. In addition to this, both the creators and recipients of these files (agencies and publishers in DDAP's eyes) require these files to be used in more media applications than just ink on paper.

The only way to achieve these expectations is to put state-of-the-art tools in operators' hands, and that implies a state-of-the-art file format. At DDAP, we have always viewed PDF as the file format of the future, but not quite ready for prime time. The introduction of PDF/X-1a heralded the arrival of a file format that was structured to survive the rigors of a Graphic Arts workflow. Yet deliver the benefits of a smaller file size, a searchable architecture and a format that can be used in more than one medium.

We believe that adoption of a PDF-based workflow is key to integrating manufacturing and business processes and the adoption of a PDF/X-based workflow gives all those advantages PLUS a robust, Graphic Arts-specific file format that protects the integrity of creators' intents.

From the Quality House of Graphics standpoint:

All of the above stands, and we are so committed to this file format that our workflow has been re-engineered to make PDF/X-1a the digital master from which all our file, proof, plate and film products are derived to satisfy our advertising, entertainment and commercial printing clients.

Alan Darling
COO and CTO, Quality House of Graphics.
Chairman, DDAP Association

Everything You Want to Know About PDF/X and Have Been Waiting to Ask

The Canadian publishing, prepress and printing community applaud the initiative to bring this PDF/X guide to life.

We are believers in open standards, supporting the recommendations of dMACS (Digital Magazine Advertising Canadian Specifications) and SWOP. Our members tell us that they are eager to embrace the benefits that well made PDF/X files have to offer.

PDF/X promises to be the building block required to move digital magazine production to the next level, providing an open, accredited and universally accepted and supported file format for supplied ads.

Why do we like it? PDF/X is a final digital format which can be vector-based providing a small final file size and pre-RIP flexibility. The broad base of PDF file acceptability in the industry make it a superior file format for shorter print runs, demanding deadlines and multi-language requirements. And let's not forget that files can be easily repurposed for other output requirements.

PDF/X allows distribution to multiple sites, without the need to remake, consistently every time. As someone once said, "You can send it and forget it!".



But we also know that it is possible to make a "bad" PDF/X file, from a printing perspective. That's why the PDF/X Guide is an important educational and informational tool, providing users with the know-how to get it right, every time, so that the promise of the standard can be fully realized.

For information pertaining to dMACS specifications, please visit our Web sites at:

- www.magazinescanada.com/MACS/MACS.shtml

and/or

- www.dMACS.org



PDF/X, a Valuable Tool down under...

For graphic arts companies in Australia and the region, international standards such as PDF/X are particularly important given the globalization of the industry.

Our regional industry has dealings with customers and vendors in North America, Europe and Asia and the Graphic Arts Services Association of Australia welcomes agreed international production protocols such as PDF/X. GASAA, established in 1923, is the regions only pre-press and digital data management trade and technical association

Guidelines for the digital delivery of advertising have operated in Australia for some period now and the emergence of agreed transfer standards such as PDF/X will adds to the predictability of digital data interchange – so important in today's graphic arts industry.

Like our international counterparts, graphic arts companies in Australia are required to handle and output production jobs that have been prepared using a myriad of application software with widely varying skills of the originator. Adobe's Acrobat, with its many variables, provides a convenient tool to transfer cross-platform data from originator to service providers. PDF/X compliance however should help reduce these variables to acceptable levels for consistent pre-press PDF transfer and output.

We look forward to seeing the intent of PDF/X, i.e. a convenient, reliable pre-press and print specific file format becoming an industry reality in the near future. GASAA has watched with interest the industry collaboration in developing PDF/X protocols and congratulates all those involved.

Garry Knespal
Executive Secretary
Graphic Arts Services Association of Australia
www.gasaa.asn.au

The publishing and printing industries are ready for a change. This change is to embrace and to adopt the PDF/X1a file format as we have at Time Incorporated. To some, the reasons to change to file format may not be immediately apparent. Over time, however, you will reap the many benefits that PDF has to offer. With PDF/X1a, I am certain that you will soon find ways in improving your workflow both internally and externally. Please keep in mind that though PDF/X1a is a professional file format written specifically for the print market, it can also easily adapt well to other media.

Getting started in PDF/X1a is simple. This guide, written for all level of users, from beginners to experts, will start you on your way. Whether created in-house or by your pre-press provider, PDF/X1a can be created easily and inexpensively. The transition to PDF/X1a may seem troublesome at first, but by adopting a common standard (PDF/X1a) of digital file exchange, everyone will benefit. Over time, I am confident that everyone involved in print will only exchange files in the PDF/X1a format—you will wonder how you ever got along without it.

Time Inc. has devoted considerable resources to testing and validating the PDF/X1a format. Embracing and using PDF/X1a for digital file exchange should be an easy choice for everyone. I hope you are now excited about PDF/X1a; it is the file format of choice for print and beyond.

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Part 2: PDF/X Solutions

Introduction

The PDF/X standards were created by a group of concerned industry leaders in an effort to address many of the troublesome issues associated with the increasingly changing, collaborative print publishing process. While it would be nice to believe that these standards would solve all of the problems associated with this process, PDF/X is just a file format.

The real benefits to this format can only be achieved when created and used in conjunction with specialized software that supports and enhances the process itself. Throughout this part you will see many software solutions that have been developed to enhance the needs of your individual production workflows through the use of the PDF/X file formats.

Topics

This part deals with the PDF/X solutions provided by the following companies or organizations:

- ["Agfa"](#) on page 27
- ["Apago"](#) on page 33
- ["callas software"](#) on page 38
- ["CGS Publishing Technologies International"](#) on page 44
- ["Creo"](#) on page 47
- ["DALIM Software"](#) on page 52
- ["DDAP Association"](#) on page 56
- ["Fujifilm"](#) on page 59
- ["Global Graphics Software"](#) on page 61
- ["Heidelberg"](#) on page 64

Agfa Apogee Series3 – a new vision of workflow efficiency.

Since its introduction 5 years ago, Agfa Apogee has been expanding the traditional scope of prepress and printing by involving designers and content creators upstream by helping them to generate reliable workflow optimized PDFs, as well as the pressroom downstream by generating CIP3 PPF files that automatically setup the ink-key settings of printing presses. With Apogee Series3, Agfa streamlines workflow even more by automating and distributing processes, and by enabling the integration with other departments for enhanced and streamlined production. Agfa Apogee also provides support for PDF/X enabling reliable processing of externally created files. In short, Agfa Apogee Series3 enables you to move to an all-digital workflow that stretches throughout your operation.

How to process PDF/X within Agfa Apogee Series3?

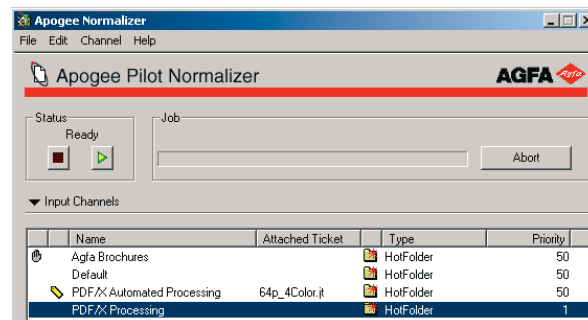
The processing of a PDF/X file in Apogee Series3 is done based on the following steps:

- "1. Create an Input Channel for the Apogee Pilot Normalizer based on a hot folder"
- "2. Define Preflight options"
- "3. Create a Job Ticket"

1. Create an Input Channel for the Apogee Pilot Normalizer based on a hot folder

Prior to inputting documents, you need to create a PDF/X Hot Folder input channel that contains the following:

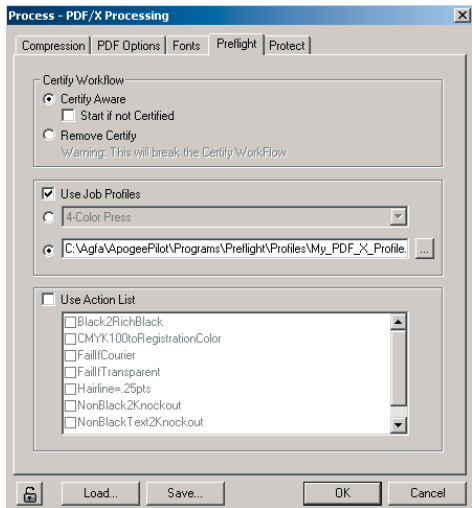
- a name
- input folder location for the incoming PDF/X files
- output folder location or Page Store where all processed files are stored
- input channel properties
- input channel processing options



2. Define Preflight options

The Apogee Pilot Normalizer generates PDFs from incoming PS or EPS files, and assures that design intent such as spot colors, spot blends, multi-tone colors, bleeds, colorized TIFFs, black overprint, and more are reliably captured within the PDF file. Once PDFs have been created successfully they can be checked using the built-in Enfocus PitStop Server, to assure the PDFs are reliable and will process further downstream as expected. This preflight process is also very useful for already created PDFs and PDF/X files that are received from external sources. PDFs and PDF/X files that pass the preflight process successfully are stored in a repository that we call the Page Store.

You can configure **Preflight** to generate warnings for specific problems found in the PDF/X files. In this case, the PDF/X files are still saved in the Page Store, but they are accompanied by a Preflight report which includes these warnings. The Apogee Job Ticket Editor monitors the Page Store, and will detect any such warnings, and will flag them in the Available Pages panel. You can also configure Preflight to always fail PDF/X files that do not meet a specific set of criteria.



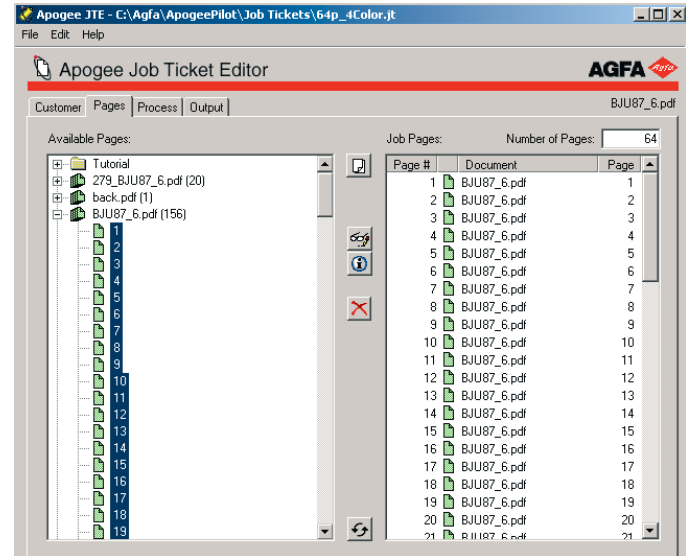
Preflight is enabled in the PDF/X Hot Folder input channel by selecting one of the built-in profiles, or by selecting your own custom profile that you created by using the bundled Enfocus PitStop plug-in.

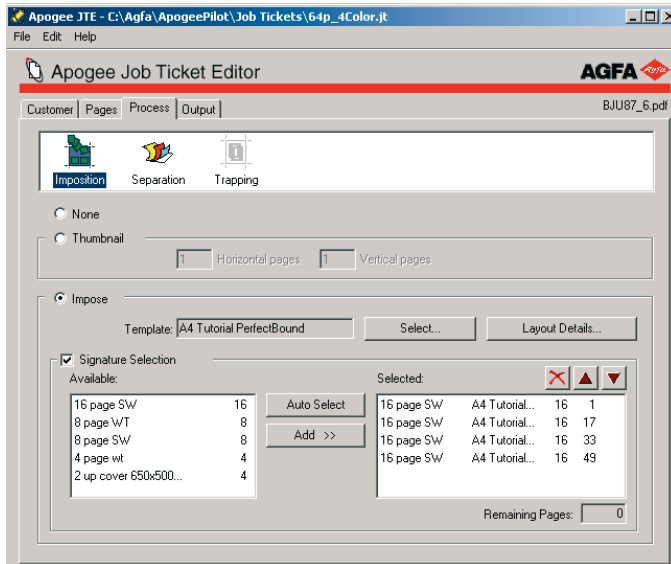
At the same time you can enable the ***Certify Workflow***. The Certify Workflow option ensures guaranteed preflighting and document consistency. It basically uses the Enfocus Certified technology, and enables you to find out who preflighted the PDF, which profile was used, and what changes were applied at later stages. All of this information is carefully stored within an edit log file and saved within the PDF file.

3. Create a Job Ticket

A job ticket contains the following information:

- customer information and job description
- available pages/documents in the Page Store
- referenced PDF pages and job pages
- imposition template
- color separations and spot color behavior
- trapping specifications
- output parameters and output device settings

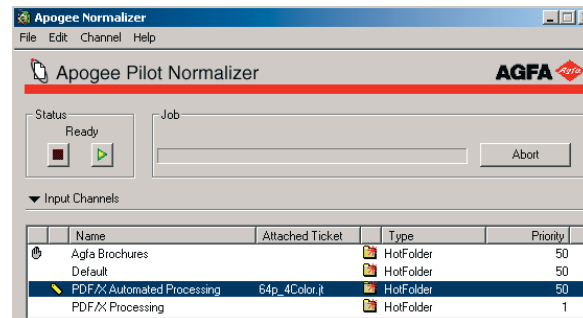




The job ticket that is being created is referencing the PDF/X pages and includes information on how the PDF/X is to be processed. Via integrated imposition, the Apogee system imposes pages and determines (spot) color behavior. Then the imposed pages are passed on to the Apogee PDF RIP (or any other PS3 RIP) for rendering.

One of the major features of Apogee Series3 is automation. Therefore, the process as described on the previous pages can also be automated by attaching the job ticket to the PDF/X Hot Folder input channel. Any file entering this input channel, will automatically pick-up the job ticket, and be processed according to the descriptions within the job ticket without user intervention.

To enhance automation even further, you can also integrate with MIS or other production planning systems using JDF. Processing intent is described in JDF upfront, and passed along to Apogee by simply dropping the JDF into a JDF aware Input Channel. Besides the various process specific information does the JDF also include references to the PDFs or PDF/X files that are stored within the Page Store. As soon as the JDF is received, the pages are picked up, and automatically processed within Apogee.



Apago

Apago PDF/X Checkup is designed to be the most simple tool available for PDF/X verification and creation. Simply open an existing PDF file with Adobe Acrobat and click the Checkup toolbar button. Checkup examines all of the elements in the PDF file for compliance with the PDF/X standard. When a PDF file fails to comply with the standard, one click on the “Fix All” button and Checkup automatically fixes the most common errors. The following overview demonstrates the use and capabilities of this Acrobat plug-in from Apago, Inc.

Installation

The PDF/X Checkup installer places on the user’s computer: the Checkup plug-in, a user guide in PDF format, a job options file for use with Distiller, and a PPD for use with Page Layout programs. The software provides a 15-day demo period that is fully functional, allowing the user to try the software with live files.

Configuration

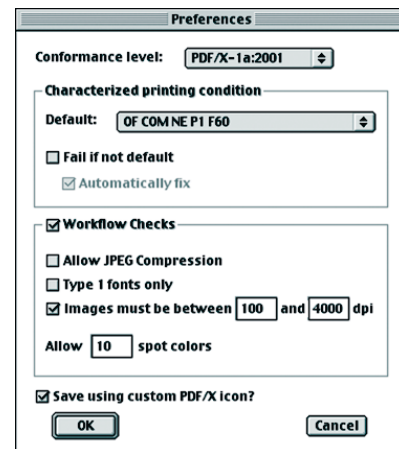
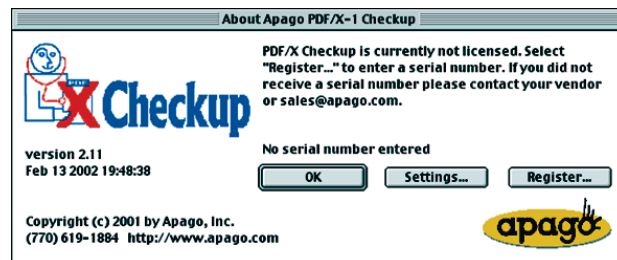
PDF/X Checkup settings can be accessed from the Apple menu or from the Results dialog box, which appears after checking a PDF file. The Settings dialog box allows the user to select a PDF/X conformance level, a characterized printing condition, and whether to use a special PDF/X icon (for Macintosh only) for PDF files that have passed PDF/X Checkup’s verification. Starting with version 2.50, Checkup also allows the user to check for common workflow concerns, in addition to PDF/X conformance. The optional workflow checks allow the user to screen for JPEG compressed images; to accept Type 1 fonts only; to establish upper and lower resolution limits for images; and to specify the maximum number of spot colors allowed. Here is a step-by-step guide to setting the configuration on a Macintosh.

- 1 Start Adobe Acrobat.
- 2 Select Apago PDF/X-1 Checkup from the About Adobe Acrobat Third Party Plug-ins... from the Apple menu.
- 3 Click Settings.

- 4 Select your conformance level. Your choices are:
 - PDF/X-1a:2001 – The most common conformance level designed for blind exchange. All fonts and images must be embedded. Colors are limited to CMYK and spot colors.
 - PDF/X-3 – Available in Checkup v2.50. PDF/X-3 is a superset of PDF/X-1a:2001 that allows managed colors including RGB and Lab.

5 Select a Characterized printing condition. A characterized printing condition is a printing condition (offset, gravure, flexographic, direct, etc.) for which process control aims are defined.

PDF/X Checkup offers a choice of nine different characterizations that are publicly available via the accredited standards process or industry trade associations. "TR 001", commonly called SWOP, was created by the Committee for Graphic Arts Technologies Standards (CGATS) and is commonly used in North America for publi-



cations. The others are from The Federal Association of German Printers (BVD) and the German Research Association for Printing and Reproduction Technology (FOGRA). The BVD/FOGRA characterizations address a wide range of printing applications. Visit <http://www.color.org/registry2.html> for the most up-to-date information on these characterizations.

6 Select “Fail if not default” to limit your PDF/X file to the characterized printing condition specified above. Any other characterized printing condition will be rejected. If this option is not selected, PDF/X Checkup will pass any PDF file that has a valid printing condition whether or not the condition matches the setting for the default printing condition.

7 Select “Automatically fix” if you want PDF/X Checkup to change your characterized printing condition to the default condition. Please keep in mind that images prepared for one printing condition may not print the way you expect if you specify a different characterized printing condition in the PDF/X-1 file.

8 Select “Save using custom PDF/X icon” to use a special PDF/X file icon when saving files from Checkup’s results dialog.

9 Select “Workflow Check” to have Checkup examine the PDF file for common workflow problems.

- Select “Allow JPEG Compression” to allow JPEG compressed images.
- Select “Type 1 Fonts only” to restrict fonts to PostScript Type 1 fonts only (no TrueType, CID or other non-Type 1 font).
- Selecting “Images must be between...” and filling in the lower and upper dpi limits will generate a workflow warning if the resolution of an image is too high or low resolution.
- Entering a number in the “Allow spot colors” field sets the maximum number of spot colors. To insure CMYK only, enter '0'.

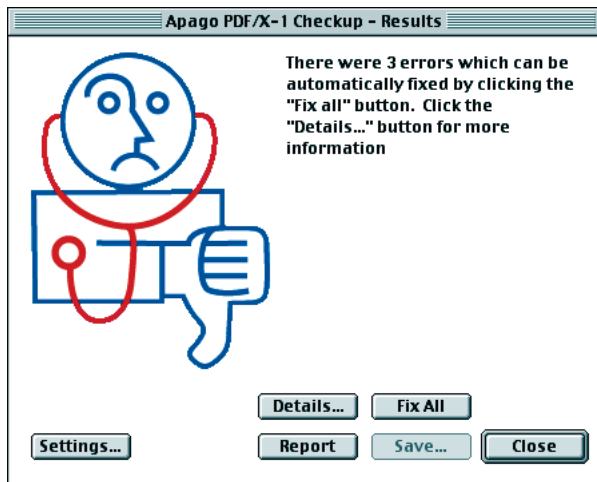
Verifying a PDF/X file

The Apago PDF/X Checkup plug-in examines PDF files for compliance with the PDF/X specification. After opening a PDF file in Acrobat, you can click the PDF/X Checkup button to check the file for compliance. PDF/X Checkup reports whether the file passes or fails and offers the choice to write a report. Here is a step by step method to verify a PDF/X file.

- 1 Open the PDF file in Adobe Acrobat.
- 2 Click the Checkup toolbar button or Select "Apago PDF/X Checkup" from the Tools menu. PDF/X Checkup quickly examines the PDF file and displays a message indicating if the PDF file passed or failed.

A "thumbs up" indicates that the file is a 100% legal PDF/X file and meets all the requirements of the conformance level you selected. You can do one of the following:

- Click Details to view individual the error or warning messages.
- Click Report to generate a tab delimited text file which you can print, import into a database for job tracking or send in e-mail to clients and customers.
- Click Save to save the PDF/X file to disk.
- Click Settings to display the Preferences dialog box.



Fixing non-compliant files

Apago PDF/X Checkup can automatically fix many items that prevent a regular PDF file from being a PDF/X file. When PDF/X Checkup examines a non-compliant file, a "Thumbs Down" will appear. Here you will be offered the option to Fix All, view Details, generate a Report, change Settings, Save the file or Close:

- Fix All will correct all automatically fixable errors. If the file contains errors which PDF/X Checkup can not fix, the software will continue to display a thumbs down message.
- Details... provides detailed information about the PDF file examined. The details will be displayed on screen. The list will include information about the error and will include warnings about features which are not specifically addressed in the PDF/X specification.

- Report... Creates a detailed report file.
- Save... Save the PDF/X file to disk.
- Settings... Displays the Preferences dialog.

Pricing and system requirements

PDF/X Checkup is designed to be cost effective as well as easy to use. PDF/X Checkup sells for only \$249* per copy, A site license is available for \$3,000* and company-wide license for \$10,000*. Hot-folder automation is available as a \$100* option. PDF/X Checkup is available for both MacOS and Windows and requires the retail version of Acrobat 4 or later. PDF/X Checkup will not work with the free Acrobat Reader.

*Prices subject to change without notice.

pdfInspector2: The Premier Tool for PDF Preflighting and PDF/X Conversion and Verification

pdfInspector2, released in November 2001, is the first tool worldwide to offer support for the new ISO 15930 standards PDF/X-1a and PDF/X-3. Furthermore, it offers unsurpassed preflighting capabilities for any regular PDF file.

pdfInspector2 is available as a plug-in for Adobe Acrobat 4.05 or later on Mac and Windows, from callas software's online shop at www.callassoftware.com. It is also available in OEM versions for software developers and system integrators: as a shared library on Mac OS, Linux and Sun Solaris or a DLL on Windows, pdfInspector2 has created a lot of interest with companies that need to preflight PDF documents without running Adobe Acrobat.

Also, for easy integration with existing systems and infrastructure, it is available in combination with the Apache Web server, through a special Apache module that makes it possible to implement IP-based access to preflighting and PDF/X conversion services.

Introducing callas software

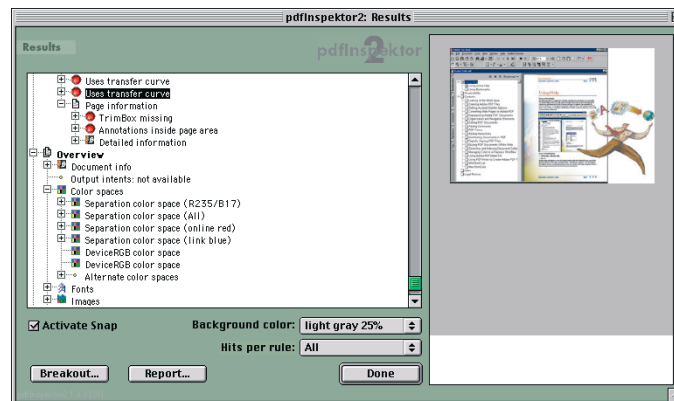
callas software, maker of pdfInspector2 as well as other PDF tools, such as the Adobe Acrobat plug-ins pdfOutput, MadeToPrint and AutoPilot, has been developing PDF-related software and technology since 1997. With its intimate knowledge of today's requirements in editorial and prepress production, callas software has built a large customer base throughout the whole world. Many of the largest publishers, agencies, prepress service providers and printers rely upon callas software tools on a daily basis. The all-time favorites — besides the Acrobat plug-ins mentioned above — are XPress XTensions for printing and automation, as well as the famous FontIncluder for embedding fonts into EPS and DCS files.

After the success of pdfInspektor 1, which was praised for its speed, reliability and ease of use, we realized that an even more powerful tool for preflighting and analyzing PDF was needed, as customers were becoming more and more demanding, and the PDF format was ever more widely used.

Also, with PDF/X on the horizon, it became clear that PDF would quickly become the mainstream format for delivery of digital files. Early 1999, we decided to start again from scratch, and by today we believe to have implemented the most comprehensive and powerful PDF analysis engine currently available.

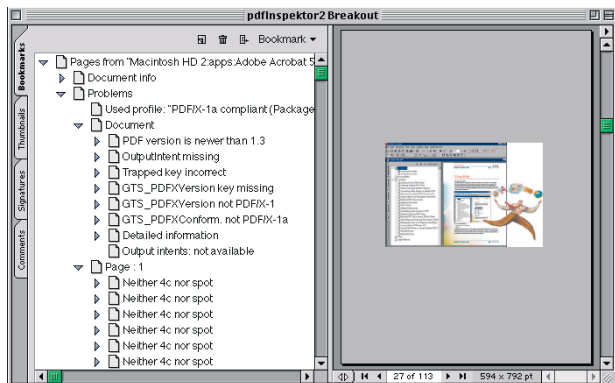
pdfInspektor2 is based upon PDFEngine, callas software's own PDF library, which in the meantime has been licensed to several of the largest international vendors of prepress solutions.

In its current version, pdfInspektor2 offers more than 400 different checks which can be orchestrated into preflight profiles in any combination. While the built-in preflight profiles cover more than three quarters of most users' daily needs, there are unlimited possibilities to modify the built-in profiles or create custom profiles from scratch.



pdfInspektor2 displays the results of its preflight check in the intuitive Results dialog box, with powerful navigation features: the user can "extract" a problem from the page and display it in the Snap view – an extremely useful inspection feature for complex pages where many object partially or completely overlap each other.

When designing pdfInspector2 we decided to make the technology as open and amenable to integration as possible: pdfInspector2's preflight profiles are stored as XML, the software has various interfaces for automation, and it feeds back its results as a report file in either ASCII, PDF or XML format. Also, its comprehensive implementation of PDF/X conversion and verification has been documented down to the smallest detail so that users are not kept in the dark when they wish to learn how pdfInspector2 is carrying out its PDF/X-related operations.



"Breakout" is an overview report you can carry home or send to your customers. Apart from the Snap-like display of the problematic objects saved as a PDF file, the accompanying book-marks provide all the information on the problems as well as the source document in general.

User-friendly Preflight Reporting

The features most loved by users of pdfInspector2 are its unique ways of displaying results to the user: instead of simply providing a dry text-based cumulative summary of the errors in a PDF file, it not only provides a hierarchically structured display of problem information, but also extensive overview information.

pdfInspector2 offers a unique "Snap" feature that displays any problematic object on a PDF page in its own window.

In order to be able to share preflight reports easily with colleagues or customers, a highly intuitive and self-explanatory "Breakout" report can be created, that lists each problem found in a PDF file on its own PDF page, accompanied by a detailed description of what that object is and what's wrong with it.

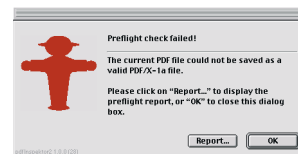
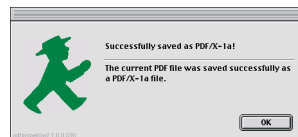
All these features come in handy at a time where PDF/X is gaining momentum: Delivery of PDF/X files is requested by more and more publishers and printers, with some of the largest publishers worldwide, like Time Inc., as fore runners. pdfInsektor2 offers a straightforward implementation of PDF/X, that allows a user to preflight any PDF file for suitability for PDF/X and – if all goes well – to turn that PDF file into a validated PDF/X file.

There are also quite a few problems that pdfInsektor2 can fix automatically – e.g. converting LZW compression into ZIP compression, setting the Trapped key, adjusting the trim box and bleed box, removing transfer curves or transparency: all that's needed to turn an otherwise reasonably well created PDF file into an approved PDF/X file.

If nevertheless there is something pdfInsektor2 cannot fix, a detailed problem report will inform the user about the errors encountered. Besides this, a user can combine the PDF/X specific preflight and conversion with other preflight checks that do not form a part of the ISO PDF/X standard. Thus, creation and verification of PDF/X files becomes a matter of clicking a couple of buttons and holding your breath for a couple of seconds.

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As XML has become the predominant format for exchanging information between applications, the pdfInsektor2 XML report will be valuable for those who want to analyze problem reports using custom software or who need to store preflight information in a database.



Instantly recognizable symbols allow you to ascertain the success or failure of the PDF/X verification and conversion process at a glance.

The Company: callas software

callas software gmbh was founded by Olaf Drümmer in 1995 and has become a highly recognized vendor of productivity tools for editorial and prepress production. Extensions for the most important mainstream applications provide impressive potential for increasing efficiency and reliability of day to day tasks like preflighting and generation of correct output. Automation tools like AutoPilot help customers streamline mission critical high volume workflows. XTensions for QuarkXPress, Quark Publishing System and QuarkDMS, Plug-Ins for Adobe Acrobat and Adobe InDesign as well as standalone applications like FontIncluder have become highly valued tools for numerous customers worldwide.

From 1997 on callas software has become one of the most important vendors of PDF tools for prepress production. Relying on their own PDFengine has put them in a position where tools with nearly identical functionality can be offered as Acrobat plug-ins as well as standalone applications and shared libraries that run on Mac, Windows, Linux and Sun Solaris without Adobe Acrobat.

The Founder, Olaf Drümmer

Olaf Drümmer, founder of callas software gmbh, has been involved in the European Color Initiative for several years, promoting advanced technologies for tomorrow's media and device independent workflows. Together with Stephan Jaeggi and several other industry experts he initiated the Swiss German "PDF Experts roundtable", who published the "PDF for prepress White Paper" in 1998. From 1999 on, Olaf Drümmer joined the ISO working group for PDF/X and, again together with Stephan Jaeggi, wrote the first draft of the PDF/X-3 standard, which has just been approved in April 2002.

Olaf Drümmer is a frequent speaker at major industry events and offers seminars about PDF for prepress and especially PDF/X. His articles can be read in German and Swiss trade magazines, and in 2001, together with Thomas Merz, he published the second edition of the "PostScript & PDF Bible". Currently he is focusing on

advancing color management technology and educational efforts so that color management becomes more accessible and viable in day to day production for the average user and will find more wide spread use in the hopefully not too far away future.

PDF/X Resources

In Europe, two essential resources have been established that address issues around modern PDF workflows and color management, with PDF/X being their natural focus: The Web site of the European Color Initiative (www.eci.org) and the PDF/X Web site www.pdfx.info. On these Web sites valuable information – background information about PDF/X as well as free cookbook recipes about generation and verification of PDF/X – can be found as well as information how to subscribe to various mailing lists, covering areas like implementation of color management and PDF/X workflows, as well as a forum for PDF/X developers.

On its own Web site www.callassoftware.com, callas software gmbh offers free demo downloads for most of its tools, as well as extensive information about all of its products. The most favorite download in the past months has been the White Paper "AutoPilot – Automating PDF workflows". For international customers, a list of preferred resellers and integrators of callas software tools and solutions is provided. The callas software Online Shop lets customers purchase most products immediately.

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URL www.callassoftware.com

CGS Publishing Technologies International

Company Background

CGS Publishing Technologies International, GmbH was founded in 1985 in Hainburg, Germany – a small town some 30 miles east of Frankfurt. The company comprises a staff of over 50 people based in Hainburg with the majority in Research & Development and Technical Support.

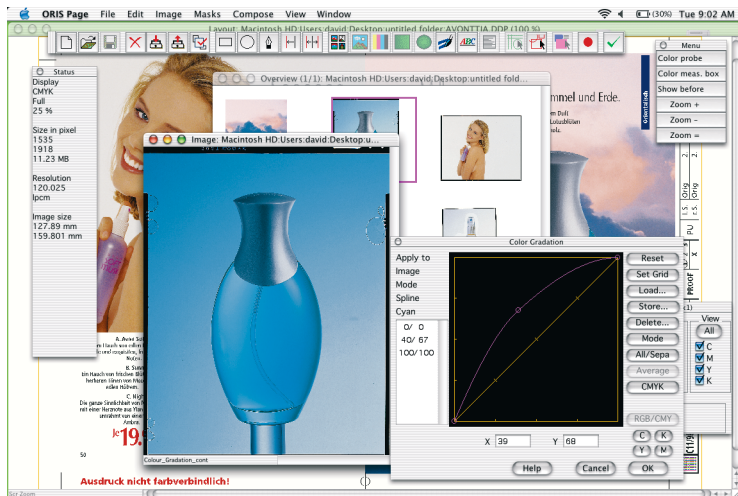
CGS became a major supplier of high-end pre-press production and workflow software solutions for the printing and publishing industry and, early in 1999, it expanded its overseas marketing by forming CGS Publishing Technologies International, LLC based in Minneapolis, Minnesota providing sales, marketing and technical support throughout the USA.

Product Line

CGS products include:

- O.R.I.S. Page™, a desktop version of our original full-function pre-press system,
- O.R.I.S. Works™, a user-configurable automatic workflow program for file format transformations, OPI, trapping and color management, and
- O.R.I.S. Color Tuner™, a unique color-managed RIP for high-end, contract-quality proofing on ink jet printers. Coupled with CGS' own inks and papers to form the O.R.I.S. Digital Proofing System, it is the only SWOP-certified drop-on-demand proofing system for ink jet printers.

All our products support PDF and PDF/X.



O.R.I.S. Page

Mac and PC users can now use a single program to make all corrections and modifications – including transparencies and soft edges. The O.R.I.S. Page parser is capable of interpreting any PDF, PDF/X and PS Level 3 document independent of the DTP program used to create the pages. All page elements – text, images, graphics and paths – are converted to editable high-resolution objects and separate layers.

O.R.I.S. Page provides powerful tools for retouching, text correction and the creation of cut-outs and shadows at an incredible speed using OS X in native mode. For maximum production reliability finished pages can be output in PDF, PDF/X and Flat PS, or in EPS, DCS, JPEG, TIFF, TIFF/IT or Scitex Handshake.

O.R.I.S. Page runs on Mac OS X in native mode using the new Aqua user interface as well as on Mac OS 8 and 9 and Windows 2000/XP.

O.R.I.S. Works

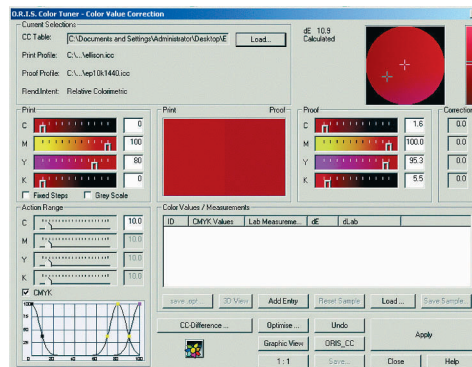
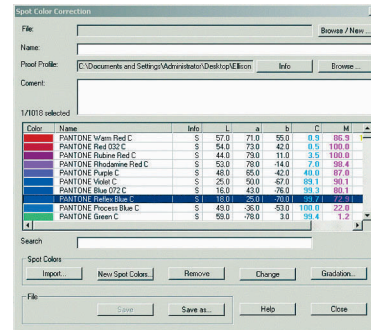
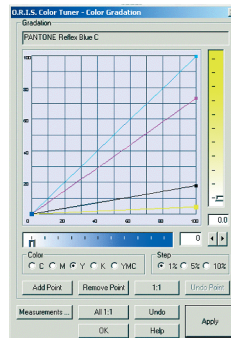
O.R.I.S. Works is a fully user-configurable automated workflow solution that uses daisy-chained hot folders to define file conversions, color transformations, OPI, trapping and any feature available in O.R.I.S. Page or other third-party applications. O.R.I.S. Works can easily be tailored to, and configured for, the user's specific requirements. As such, it offers a fully automated PDF and PDF/X workflow.

O.R.I.S. Digital Proofing System

Comprises O.R.I.S. Color Tuner, CGS inks and Media, and any Windows printer to provide SWOP-certified contract proofing of PDF and PDF/X files.

O.R.I.S. Color Tuner, based on ICC profiles, provides the tools necessary to achieve a true press match using selective color correction of CMYK and spot colors. CGS inks and paper ensure full SWOP color gamut with no color shifting over time.

The CGS product line provides an integrated PDF/X editing, workflow and contract proofing solution for today's pre-media specialist.



Committed to PDF/X

The Creo commitment to PDF/X is evident across our entire line of software products, from desktop creative tools through to print-production workflow systems. Creo began our strong support of international standards as an active member in ISO standards committees and was an early adopter of the TIFF-IT/P1 format. Creo was the first company to print a PDF/X-1a file in March, 2000, and our dedication to developing this standard continues today. PDF/X is an integral component of a Creo Networked Graphic Production solution, which delivers a fully integrated digital print-production process that extends from idea to delivery. Creo solutions that currently support PDF/X are Synapse™ Prepare desktop software, PS/M RIPs, Brisque™ workflow systems, and the Prinergy® PDF-based print-production system. We are proud to participate in this resource book and encourage you to incorporate PDF/X into your workflow.

Creo workflow systems and PDF/X-1a

The PDF/X-1a file format improves the reliability of file delivery in PDF by limiting the format to specific usage, file types, and color representations, and then by optimizing the file for print-production. Creo currently offers four products that support PDF/X-1a creation, verification, and rendering:

1. Synapse Prepare: creating PDF/X-1a from the desktop

Many believed that the introduction of PDF would help to eliminate all of the problems associated with file preparation in the digital workflow. Unfortunately, generating the perfect press-ready PDF file can be a complex process. There is ample opportunity for error, which in turn can cause costly time delays in prepress. Creo understands these challenges and developed Synapse Prepare to address them.

Synapse Prepare version 1.1 is a Macintosh® desktop application that generates a secure, tested, production-ready PDF with a few simple mouse-clicks. It does this from within QuarkXPress™ or any other PostScript®-generating application by using a "Send2Synapse" desktop printer function. Print shops and trade shops can create their own custom "directives" to specify all print and preflight settings associated with a job, including those required to generate a conforming PDF/X-1a:2001 file. These directives can be provided to the creative teams, which can run Synapse Prepare to the exact specifications of the production facility when producing the original files. In doing so, Synapse Prepare bridges the gap between content creators and print professionals, facilitating job integration and collaboration. Designers using the tool can be confident that they will produce and submit reliable PDF/X output that meets the printer's specifications – the first time, every time.

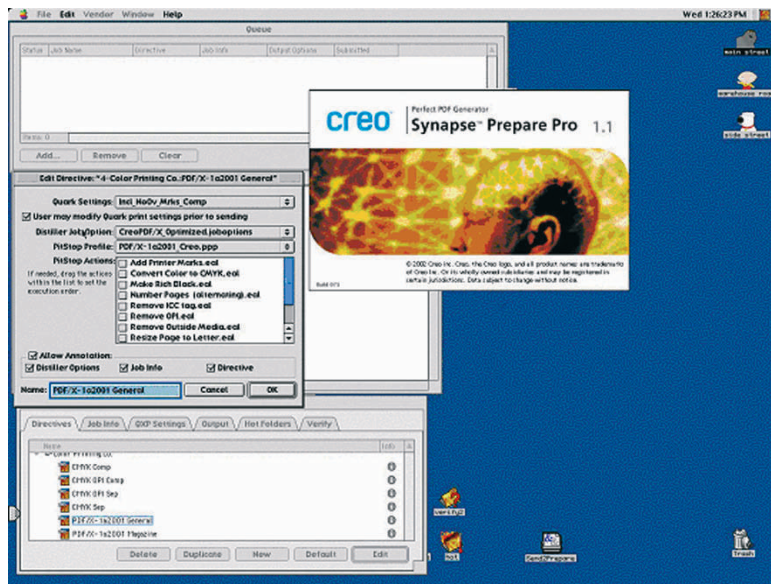


Figure 1: Synapse Prepare PDF/X-1a:2001 directive

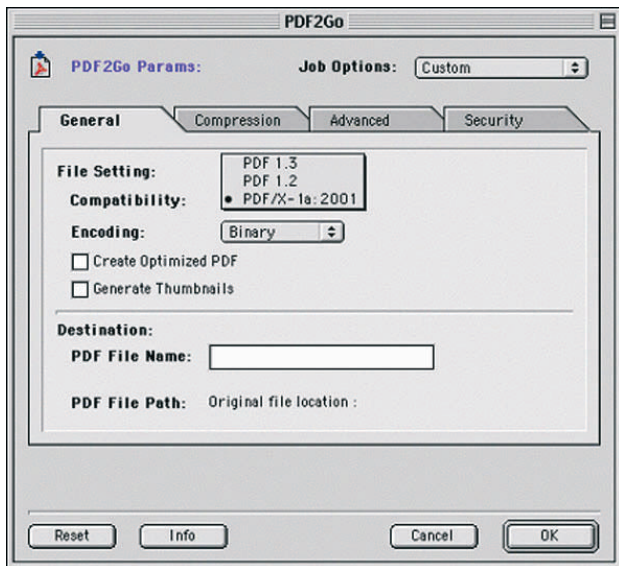


Figure 2:PS/M PDF2Go produces PDF/X-1a:2001

2. PS/M Macintosh RIP with PDF/X-1a capability

With over 5000 systems installed worldwide, PS/M is a proven and popular Macintosh-based workflow from Creo for RIPing and trapping. It was designed to reduce waste and make prepress work more flexible and manageable. PS/M version 7.1 features a full suite of Plug-ins and Extenders for DTP applications and Adobe® Acrobat® to enhance both creativity and productivity. Developed with an intuitive user interface and intended for use with filmsetters and small-format platesetters, PS/M RIPs PostScript, PDF, and PDF/X1a files to CT/LW raster files in a RIP-once workflow. The optional PDF2Go module can generate a trapped, raster PDF/X-1a output file, enabling users to create PDF/X for electronic distribution and print production.

3. Brisque workflow with PDF2Go

With more than 7000 installations worldwide, Brisque systems are the world's best-selling and most popular digital print-production workflow. A recognized technology leader, Brisque was the first system to produce a PDF/X-1a file. In March 2000, Time Inc. used a Brisque workflow to publish the first PDF/X in the industry, and Brisque continues to be used by other early adopters of PDF/X workflows today. The Brisque solution is often complemented by another product from Creo – the PDF2Go module, which converts RIPed CT/LW pages into conforming PDF/X-1a files. This functionality is extended in Brisque v4.1, which offers PDF/X-1a file pre-flight support.

4. Prinergy PDF-based print-production workflow system

The Prinergy workflow is today's market-leading PDF workflow management system. The solution serves the widest spectrum of production needs – from short-run, high-speed operations, to globally distributed, high-volume production. Based on state-of-the-art

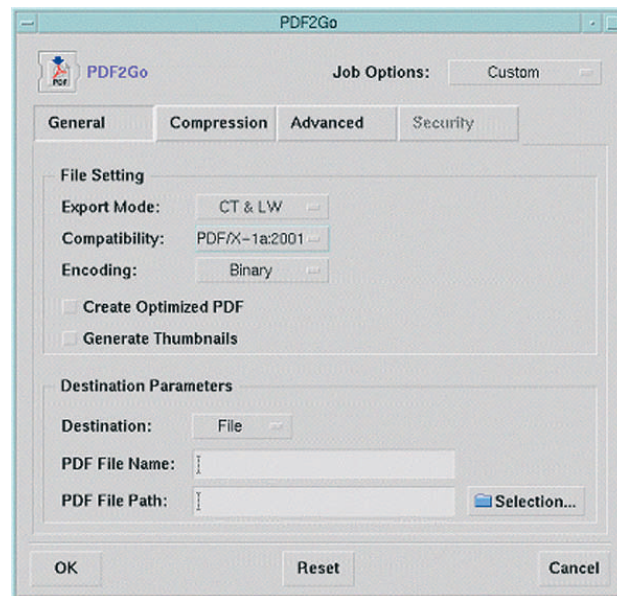


Figure 3: Brisque PDF2Go job ticket template for PDF/X-1a output

technologies and open industry standards like PDF/X, Prinergy solutions organize prepress, plate and film production like never before, creating more open, efficient and collaborative environments.

Prinergy was developed to use PDF as its internal file format. The fact that the Prinergy “digital master” PDF is already very similar to the standard PDF/X-1a:2001 format made it easy for the system to become PDF/X-1a:2001 compliant. Prinergy today supports PDF/X-1a file input and processing. With the impending release of Prinergy version 2.1, a process plan will be incorporated to allow all imported files to be refined accordingly to PDF/X-1a specifications. A single mouse click tells the Prinergy system to include the additional information required to create a trapped, resolution-independent PDF/X-1a:2001 file suitable for electronic transmission, digital file exchange, proofing and/or plate-making. This feature will provide users the option of working with PDF/X-1a as a digital master in Prinergy. Verified and automated PDF/X-1a output capability will be available in the Prinergy version 2.1 release.

Committed to open industry standards

A fundamental tenet of the Creo Networked Graphic Production initiative is a commitment to supporting open industry technology standards such as PDF/X. Creo Networked Graphic Production solutions are designed to streamline production and business processes. They create collaborative environments that provide creative professionals and prepress providers with the tools to integrate and optimize print-production systems in order that all those involved can achieve the highest levels of quality, efficiency and profitability. The modular, open architecture of the solution allows for customization to meet specific business needs and establishes a solid foundation to build on as a company grows or changes.

To effectively deploy a Networked Graphic Production environment, all of the systems involved must be able to exchange information in a timely and efficient manner. Creo solutions use accepted industry-standard communication protocols – such as PDF/X-1a:2001 – as the backbone of each product to collect and transfer data across the production network and through to the business system. For more information on how Creo is involved with PDF/X or to learn more about Networked Graphic Production, please contact your local Creo representative or visit www.creo.com.

DALiM Software

Creating a PDF/X-1a Workflow with DALiM TWIST or SWiNG Applications

DALiM Software's PDF/X-1a generation tool is one of a collection of pre-defined tools, each tool executing specific actions on incoming files. Several tools can be linked together to create a workflow that automates the entire production process as required.

The workflow can be something very simple, such as the Normalizer workflow delivered with DALiM Software's SWiNG application, that inputs PostScript/EPS/DCS files, generates a PDF/X-1a file and stores the file in a local or remote directory location.

Example Dalim Software Workflow

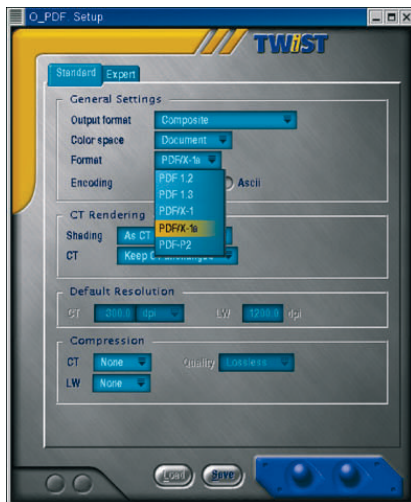


With more than one hundred pre-defined tools included in DALiM Software's TWiST automated workflow application, the workflow can be as simple or complex as desired. By inserting one or several of the pre-defined input tools in the workflow, you can input virtually any file format and output it as a PDF/X-1a compliant file. With an extensive range of transformation, filter, proof and move tools, the steps between the input and the PDF/X-1a generation can be as varied and comprehensive as required.

With DALiM Software's unique "PPD-Driven Workflow" system, processing a file through any PDF/X-1a generation workflow is as simple as printing the file to a printer, from a familiar Macintosh interface.

How To Generate PDF/X-1a Files

To generate PDF/X-1a files, the tool responsible in DALiM TWiST and SWiNG is called the O_PDF tool. Regardless of the workflow in which it sits, the following procedure is valid for setting up and subsequently printing files to the workflow from a Macintosh workstation:



- 1 In the SWiNG or TWiST Editor application, open the workflow template that you wish to have PDF/X-1a output.
- 2 Double-click the O_PDF icon.
- 3 Under the Standard tab, click PDF/X-1a in the Format list.
- 4 Keep the default for all other options in the Standard and Expert tabs.
- 5 Click Save.
- 6 Type a name for the workflow and click OK to save the settings.
- 7 Click OK to close the O_PDF interface.
- 8 In the TWiST or SWiNG application, choose Specific > ExportAsPrinter-Queue.
- 9 Choose also Specific > Configure WFL's Macintosh PPD.
- 10 In the Workflow tab, select the O_PDF tool.
- 11 Display the Basic Tool Details tab.

12 You can now give the Macintosh operator the option to use the saved (predefined) settings, or allow the operator to change all or some of the settings. You may, for example, set the PDF_PrefdefinedSettings feature to Yes and set all other features to No, to force the operator to choose the predefined, secure, PDF/X-1a settings already created.

13 Click OK.

14 Choose DALiM > Close and save the workflow's settings.

15 Update the SWiNG or TWiST server application.

The workflow is now ready to process any number of files directly from any Macintosh application:

1 On the Macintosh workstation, select the printer queue published by the SWiNG or TWiST Editor.

2 Open your Macintosh application (Quark XPress, for example).

3 Open the file you want to process.

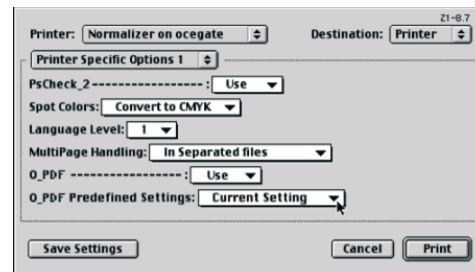
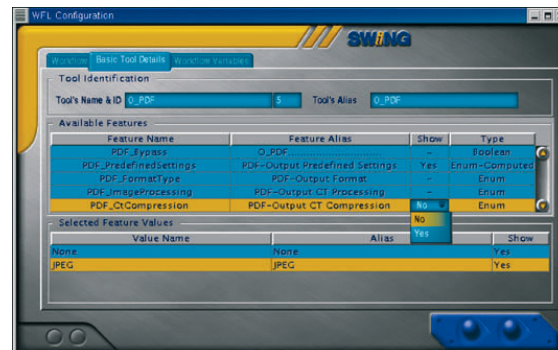
4 Choose File > Print.

5 Click Printer.

6 From the Printer dialogue box that is now open, click General and choose Printer Specific Options 1.

7 Choose the saved settings in the O_PDF Predefined Settings pop-up menu.

8 Click Print. This prints the file to the Workflow's input folder. The file is then processed as setup in the workflow, and the generated PDF/X-1a file is stored in a local or remote directory, as defined in the workflow's setup.



Notes

Using the “PPD Manager” application that ships as standard with all versions of DALiM TWiST and DALiM SWiNG, you can customize the displayed information that the Macintosh operator sees when printing to a PDF/X-1a output Workflow. The information can be customized to show, for example, customer or publication names, particular image resolutions, compression settings, etc.

With the addition of Dalim Software’s WEBLiNK application to DALiM TWiST and DALiM SWiNG, file upload, preflight information and complete PPD access is available to any client (Mac, PC, UNIX, etc.) via a standard web browser without the requirement of any application-specific browser plug-in.

DDAP Association

DDAP Software Development Initiatives

The DDAP Association has taken the initiative to develop some PDF/X tools that check the conformance of PDF-documents to the PDF/X standards:

- [DDAP PDF/X Verifier](#)
- [DDAP Digital Delivers](#)

What is DDAP PDF/X Verifier?

Developed by Total Integration, DDAP PDF/X Verifier, version 2.0 is designed to streamline PDF/X adoption by enabling users to verify that files received in this format meet the requirements of the recently published ISO 15930-1:2001 specification.

"We envision this software being extremely useful to developers and users alike," states Alan Darling, DDAP Association Chair. "As PDF/X goes into full implementation, this tool will enable developers to test their software against the published standard. It will also give users confidence in integrating this standard with their digital workflows."

Features

- Verification support for PDF/X-1a (Mac/Windows)
- Verification support for PDF/X-2 and 3 (Mac/Windows) to be developed once specification is published
- User-selectable preferences set for different levels of compliance

- Interactive user interface shows progress and a simple "Pass" or "Fail" result
- Detailed report on all errors and inconsistencies

Why Do I Need it?

- If you create PDF/X-1 files, you need to verify them before you send them
- If you accept PDF/X-1 files, you need to verify them after you receive them
- If you are a developer and you want to make sure you comply with the PDF/X-1 standard, you need to verify your files

Cost

The cost of DDAP PDF/X Verifier is:

- \$98* for members
- 128* for non-members

Plus \$12 shipping & handling

*Prices subject to change without notice

DDAP PDF/X Verifier, Version 2 customers receive software that supports PDF/X-1a (Mac/Win). Free upgrades PDF/X-2 and 3 will be provided as they become available.

What is DDAP Digital Delivers?

Designed to educate your staff, customers and suppliers on the advantages of using standard accredited file formats in digital delivery, "Digital Delivers" interactive CD ROM steps you through all the DDAP-recommended workflows and provides a solid foundation for building your digital ad strategy. The "How-to's" and "Design your own Workflow" sections alone could become the core of your company training program. "Digital Delivers" will introduce, educate and simulate all the critical workflow issues for your staff, your customers and suppliers.

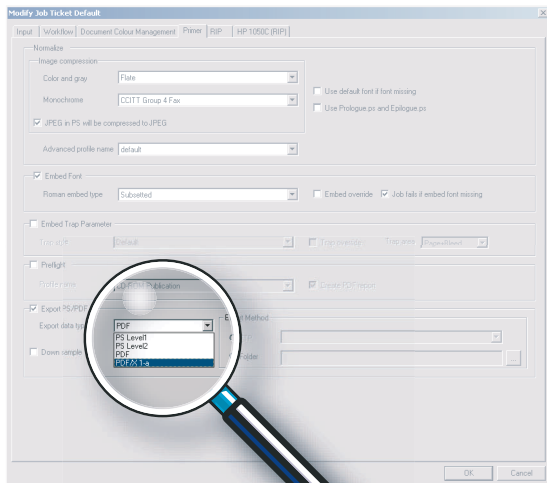
Features

This dynamic package:

- Identifies the key players and the critical roles they play in the digital ad process
- Explains all the basic terminology, gives an overview of digital workflow concepts and includes a glossary of common terms.
- Outlines all the workflow options, both DDAP-recommended and otherwise, presenting the advantages and disadvantages in clear and precise terms.
- Fully addresses the business issues of digital ad delivery and coaches you on building a digital ad team, publishing ad specs and communicating with advertisers.
- Provides a content-rich "Resources" section where you will learn "How To" prepare successful native application files, and solid PostScript and PDF files.

PDF/X Support Within Fujifilm Celebrant Extreme

Within the Fujifilm Celebrant range of workflow products, the Celebrant Primer is the software module that is responsible for the creation of PDF/X files. In coming data can be either PostScript or PDF, which is then run through a series of processes to create PDF/X files. For processing of PDF/X data, Celebrant Extreme is 'PDF/X aware' and will render these files based on the information they contain.

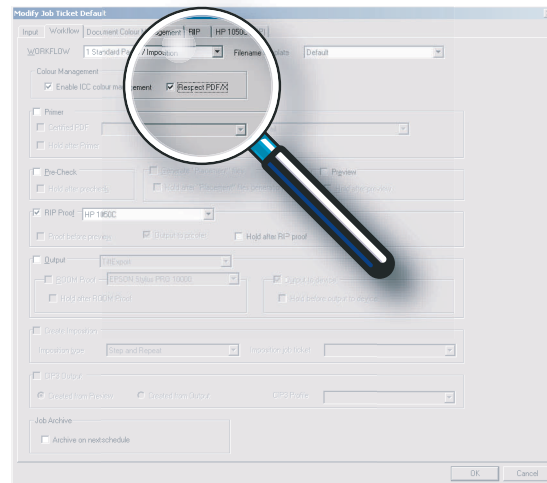


Creating PDF/X Files

The Celebrant Primer is a software module at the front end of the Celebrant Extreme workflow whose function is to create print ready PDF files. Processes such as normalizing, font embedding, color management, trapping and preflighting take place within this module. If a PDF/X or PDF/X3 file is requested, then the processing parameters will be pre defined based on the respective PDF X specifications. Additional PDF tags (such as the trapping tag for PDF/X1a files) are also inserted into the PDF so that the file fully conforms to the PDF/X specification. At the end of this process the files can be run through the integrated Enfocus PitStop preflighter as a double check that the file is a valid PDF/X file.

Processing PDF/X Files

Any Job Ticket created in Celebrant Extreme can be defined to be 'PDF/X aware'. This avoids potential pitfalls of processing PDF/X files such as trapping a PDF/X file that has already been tagged as being trapped, or color managing a PDF/X1a file which requires no color management. For the processing of PDF/X3 files, the Job Ticket will define which ICC profiles are to be applied for proofing or final press color.



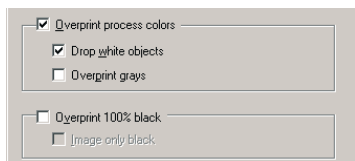
Global Graphics Software

By now you'll be familiar with an important aspect of the PDF/X standard – it not only describes what must be in a file (and what must not), but also sets out how a compliant reading application must process them. It's only by using a compliant workflow that you can guarantee that you'll generate the same output as at other sites, and that a pre-transmission proof will match the final, printed piece.

Current Harlequin™ RIPs

It's your workflow as a whole that matters, rather than any single process within it, so you need to evaluate every part on its own and in combination with the rest. If you're using Harlequin RIP™ version 5.3 or later that part of the process will probably already be very close to being PDF/X compliant – if you're running a 'Classic' edition, you may only need to flip one switch to move from the default settings to PDF/X compliance. If you're using a RIP from an OEM who provides a very different interface you'll have to ask that OEM how to make this same change.

By default the RIP treats white objects that have been set to overprint as a special case – it essentially ignores the overprint request so that the white object doesn't just disappear. This means that the default in-RIP separations from a Harlequin RIP exactly match the output you would have produced if you'd printed directly from the design application with separations turned on. The PDF/X-1a specification was written to the least common denominator of RIP capabilities, which means that the Harlequin output must be downgraded to match what other RIPs can do in order to be compliant.



To make your Harlequin RIP PDF/X compliant, open the *Edit Page Setup* dialog box and click *Color Options*. Make sure that the option *Drop white objects* is selected.

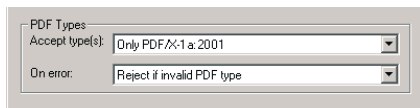
In development

Explicit support for PDF/X-1:1999 was added in version 5.3 of the Harlequin RIP, first shipped nearly two years ago – that standard is now obsolescent, and should not be used when designing a new workflow. A future version of the Harlequin RIP, currently in development, will include explicit support for PDF/X-1a:2001 and PDF/X-3:2002. The support includes both verification that submitted files comply with PDF/X, and enforces compliant processing of those files.

As a general rule, the earlier an error in a file is discovered, the less it will cost to correct. If a designer finds a problem before he's shipped the file out, he can usually fix it immediately. If it's not discovered until the file reaches the printer there may be a long chain of contacts that need to be notified in order to re-send a corrected file. The worst case scenario is if a bad file is actually printed, in which case a reprint or make-good will probably be necessary. File validation steps throughout your workflow are therefore a sensible precaution.

The last proof that a designer makes before transmitting his file to a publisher or printer should be taken from the file that he will transmit. A proof printed from QuarkXPress does not necessarily provide an exact prediction of the appearance of a PDF/X file made from the same XPress document, for instance. In-RIP verification enables a single-pass "proof and verify" step that can be used immediately before a designer sends files to a publisher or printer. The same process can also be used by that publisher or printer immediately on receipt of the files.

If your workflow is such that PDF/X files are supplied to the RIP used for final plate-making, you may also wish to have the RIP do a final verification that the files conform, just in case previous quality control steps miss a problem. Doing so does not slow the RIP down, and requires no operator intervention unless a non-conforming file is found. In those cases, the potential cost of letting a bad file through far outweighs the additional work that might be required to double-check that a specific file is OK to go to plate.



Clicking the *PDF Options* button on the page setup dialog allows you to specify what versions of PDF should be accepted.

Auto-detect types (the default) means that the RIP will automatically recognize PDF/X files and, when necessary, override some settings from the page setup to ensure that they are processed in a compliant way.

Any PDF up to 1.3 tells the RIP to treat all files as baseline PDF and not to apply any special processing to PDF/X files. This can be useful if you have a file that claims to be PDF/X compliant, but is not, and if you absolutely have to get it printed for any reason. Some workflows may end up producing files that still contain the flags that state that they are PDF/X compliant when they are not, especially when imposing pages, or compositing partial-page ads together, for instance. In those cases you don't want to verify PDF/X compliance in the RIP and should select this option.

The other options, such as *Only PDF/X-1a:2001* tell the RIP that any files that do not comply with the selected standard(s) should be rejected. Files that do comply will be processed as specified.

More details of Harlequin RIP solutions can be found at www.globalgraphics.com

Harlequin™ and Harlequin RIP™ are trademarks of Global Graphics Software Limited.

Heidelberg

Heidelberg products that process PDF/X-1a:2001 files

Heidelberg acknowledges the importance of Standards for the Printing and Publishing industry. Workflow development for Heidelberg products is based on support for mainstream Standards – PDF and JDF/CIP4.

In addition, the importance of emerging Standards such as PDF/X is recognized for file exchange.

The following Heidelberg products will process PDF/X-1a:2001 files:

- PreFlow PDF Preflighting and Trapping – v2+
- Delta Technology RIP – version 7.0+
- MetaDimension Workflow – v2.6+
- SignaStation Imposition – 7.0+
- SuperTrap PDF Trapping – v3.0+
- Prinergy PDF Workflow Management Solution v2.07+

The NexPress 2100 Digital Press supports the emerging VDX Standard which includes PDF/X-1a as one of the supported file formats. It is also planned for MetaDimension v3.0 to generate PDF/X-3 files.

Part 3: Enfocus Software PDF/X Solutions

Introduction

As a leading publisher of Adobe PDF tools, Enfocus Software saw the need to incorporate the emerging PDF/X standards into its products from the beginning. As part of its mission to be a leader in making PDFs easy and reliable for the marketplace, Enfocus Software has made sure that its technology offers full support for PDF/X creation and checking.

Topics

This part deals with the following topics:

- ["Chapter 1: The Enfocus Software "Certified" PDF Technology"](#) on page 66
- ["Chapter 2: Creating Enfocus Certified PDF/X-1a Files from within Your Design Application"](#) on page 83
- ["Chapter 3: Creating Enfocus Certified PDF/X-1a Document from Existing PDF Documents"](#) on page 96
- ["Chapter 4: Receiving Enfocus Certified PDF/X-1a Documents"](#) on page 101

Chapter 1: The Enfocus Software “Certified” PDF Technology

Topics

This chapter deals with the following topics:

- [“The “Portable Document Format” \(PDF\)”](#) on page 67
- [“The PDF Profile”](#) on page 68
- [“Enfocus Certified PDF”](#) on page 70
- [“The Preflight Report”](#) on page 80

The “Portable Document Format” (PDF)

PDF: a de facto standard for electronic file exchange

The process of exchanging electronic files is anything but infallible. The alternative? Adobe's Portable Document Format (PDF). Indeed, PDF has become a de facto standard for electronic file exchange in recent years for obvious reasons:

- A PDF document contains all the necessary information for output (page layout, images, fonts, etc.).
- The interpretation of the PostScript file is done as the PDF document is generated, which enables you to intervene if problems occur. Moreover, PDF is a less complex digital format than PostScript. Consequently, the RIP process can occur faster and is less prone to errors.
- The PDF format is independent of any application and platform: PDF documents can be viewed and changed in Microsoft Windows, on Mac OS and UNIX.
- The PDF format is object-oriented: each object can be changed in itself (e.g. using Enfocus PitStop Professional).
- The pages of a PDF document are self-contained: you can easily change their order, and extract or insert a page.
- A PDF document can be compressed without any loss of quality because different compression algorithms can be used for each type of object.
- PDF is truly a multimedia format: graphics can easily be reused and published across various media (Web, cd-rom,...).

The PDF Profile

The PDF Profile is a technology developed by Enfocus Software which enables you to specify the quality standards for PDF document. The PDF Profile can be used at the time when the PDF document is created and to perform a preflight check later on.

Using a PDF Profile, you can check some 150 criteria in a PDF document. For each of these criteria, you can specify in the PDF Profile whether it has to be ignored, reported as information or as error.

For example:

- A PDF document which has to be printed in a four-color press should only contain CMYK colors and all fonts have to be embedded
- A PDF document which has to be printed with spot colors should not contain any RGB colors

Each property of a PDF document which does not meet the criteria as specified in the PDF Profile will be reported as a "problem".

Certain problems can even be corrected automatically by the PDF Profile, e.g. ambiguous spot color definitions

When the PDF document is created, the PDF Profile is used to specify the job options of Acrobat Distiller. Consequently, you do not have to specify these job options separately in this stage of the process.

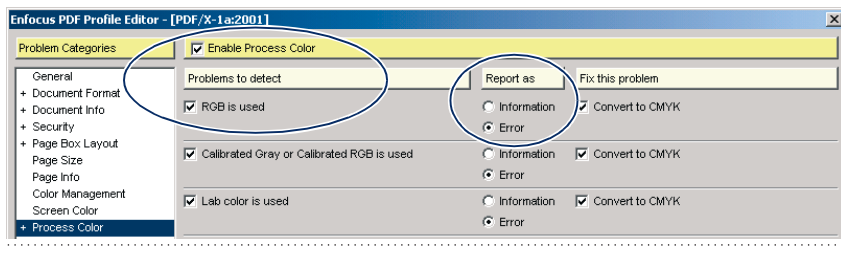
PDF Profiles

PDF Profiles can be used to preflight PDF documents. A PDF Profile is a collection of criteria which a PDF document must meet in order to be considered output-ready. For each criteria, we have specified:

- Whether or not it should be checked
- How it should be reported in the preflight report, i.e. as "Information" or as "Error", if a non-compliant property is detected

Certain criteria in the PDF Profiles contain an "automatic fix" for the detected problem: if a problem is detected, it will be corrected automatically by the PDF/X-1a profile.

RGB colors are an example of such a criterion, as shown in the illustration below. RGB colors should obviously not occur in PDF documents which have to be printed on an offset press. This criterion is checked in the PDF document and if RGB colors are detected, an error will appear in the preflight report.



You find an overview of the types of PDF/X-1a profiles in ["Why PDF/X?"](#) on page 11.

Enfocus Certified PDF

About Certified PDF

Enfocus Certified PDF is a PDF workflow concept developed by Enfocus Software based on customer requests and feedback from industry experts. The Enfocus Certified PDF concept has been designed to address three fundamental issues faced by the majority of users implementing a PDF workflow:

- How to guarantee that a PDF document was successfully preflighted with a specific PDF Profile. See also ["Preflighting in a Certified PDF workflow"](#) on page 70
- How to maintain consistency between the source document(s) and the PDF document when (minor) changes can be applied to the PDF document throughout the workflow. ["Document consistency"](#) on page 71
- How to minimize risk and responsibility when changing a customer's PDF document before final output. ["Responsibility"](#) on page 72

Preflighting in a Certified PDF workflow

A Certified PDF workflow supports the preflight process by:

- Offering the PDF document provider a simple and streamlined way to preflight a PDF document with a PDF Profile supplied by the PDF document recipient
- Including the PDF Profile and the corresponding preflight report in the PDF document. This way there can be no doubt about the preflight status of the PDF document
- Offering a straightforward user interface that enables the recipient of the PDF document to verify that the document has been preflighted successfully with a profile he or she provided

The above-mentioned features help to:

- Motivate the PDF document provider to actually preflight his or her PDF documents
- Dramatically reduce the number of problems in files received from PDF document providers

Document consistency

PDF editing issues

PDF editing tools, such as Enfocus PitStop Professional, are very convenient for making intermediate or last-minute corrections in PDF documents. This saves you both time and money because you do not have to go back to the original application program to re-create the PDF document. Sometimes, it may even be more efficient to make the changes directly in your PDF document. Enfocus PitStop Professional, for example, allows you to make global color changes throughout your PDF document.

However, PDF editing also involves a risk: as soon as you edit and save a PDF document, you create a version of a document that is different from the original document you made using a word processor or a desktop publishing software. These inconsistencies are hard to manage, and may introduce problems in archiving or when the document is republished at a later date.

PDF editing in a Certified PDF workflow

To help reduce document consistency problems, the Certified PDF workflow features a mechanism that:

- Logs all the changes that are made to a Certified PDF document
- Stores these changes inside the Certified PDF document

Based on this information, an edit log – a human readable PDF report – can be generated.

If consistency between the PDF document and the source file(s) is very important, you can use the edit log to change the source file(s) accordingly. To assist in this process, a Certified PDF document can also keep a reference to the source file(s) from which the PDF document was created. You can use this reference to make sure that the source file has not been edited since the PDF document was created.

See also:

- [“References to the original source document”](#) on page 77
- [“The edit log file”](#) on page 78

Responsibility

Responsibility issues

In addition to causing inconsistencies, changing a PDF document that was created by someone else can create ambiguity about who is ultimately responsible for the final result.

Many printers, service providers, etc. are extremely reluctant to make any changes to their customer's documents for fear of having to assume responsibility if anything goes wrong. This includes issues that can be totally unrelated to the small correction applied.

Responsibility in a Certified PDF workflow

The Certified PDF workflow settles responsibility issues by:

- Providing a detailed log file of all the changes made to a PDF document
- Keeping track of the PDF editing process, i.e. who applied which change and when

- Implementing a robust roll-back mechanism which allows you to easily return to a previously saved state – a “snapshot” – of your PDF document
- Offering the possibility to compare any two of these snapshots visually to detect and examine the differences

Snapshots and roll-back mechanism explained

In a Certified PDF workflow, a PDF document can go through various editing sessions, done by various users. A Certified PDF document “remembers” all the changes that were made during a given session and stores the information about these changes per session (“incrementally”) as you save your PDF document.

This way of managing and saving changes has a big advantage: You know exactly which changes have been made in which session and by whom. Moreover, these changes can be presented to you in the form of a “snapshot”: a “view” of the status of the PDF document at the time it was saved at the end of a session.

And if you use Enfocus PitStop Professional, you can do even more: You cannot only view the state of the PDF document in a given previous editing session, you can also save this snapshot as a separate PDF document. This is called the roll-back mechanism. When editing PDF documents, you may have experienced “one-change-too-far” situations, in which you made a change, got a undesired result but also saved the PDF document. No problem in a Certified PDF workflow: you can revert to any previously saved state of a PDF document.

A snapshot is a visual representation of the state of a PDF document at the time it was saved after an editing session. You save a snapshot to revert to a previous version of your PDF document. However, you do not necessarily have to save this snapshot at the end of each session. You can simply select any session from a list and save its snapshot at any stage in your workflow.

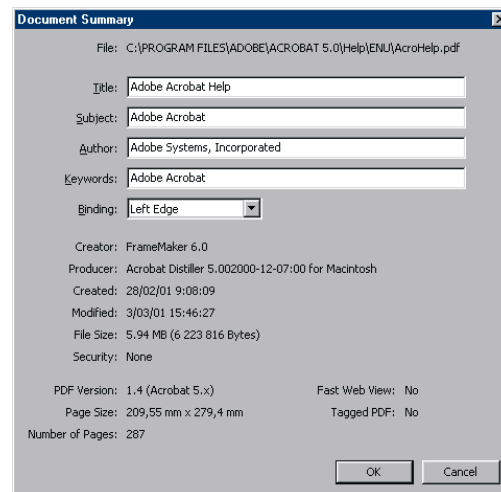
What is an Enfocus Certified PDF document?

Any regular PDF document contains metadata, i.e. information about the document itself. The Document Summary dialog box of Adobe Acrobat, for example, contains metadata like:

- The document title
- The document's subject
- The authoring software in which the original document was created (Creator)

An Enfocus Certified PDF document can be enriched with the following metadata:

- A reference to one or more source documents on which the PDF document was based
- A PDF Profile
- A preflight report
- User and system identification
- An edit log, listing all the changes done in the PDF document per editing session (the time in which the PDF document was opened, edited and saved)
- Session comments



Enfocus Certified PDF Personal Info

Personal | System

Name: Customer Support

Company: Enfocus Software

Street address: Kleindokkaal 3 - 5

City: Gent State/Prov.:

Postal code: 9000 Country: Belgium

Email: info@enfocus.be

Phone: +32 9 269 16 97

Fax: +32 9 269 16 91

Message:

Cancel OK

Certified PDF personal information

An Enfocus Enfocus Certified PDF document can contain two types of user identification: personal information and system information. Each of these serves its own purpose:

- The personal information is your name and company contact details, together with a message, if any. You can fill this in so that people know how to reach you if they should have any questions about edit or preflight actions done in the PDF document.
- The system information consists of the details of the person who registered Enfocus Instant PDF and information taken from your operating system, network and computer. This information cannot be changed and is therefore a reliable source to pinpoint responsibility, for example. If people claim or disclaim responsibility for a given change made in the PDF document, the system information will provide incontestable proof. This information will be used in the edit log to show who made which changes in a given session.

Session comment

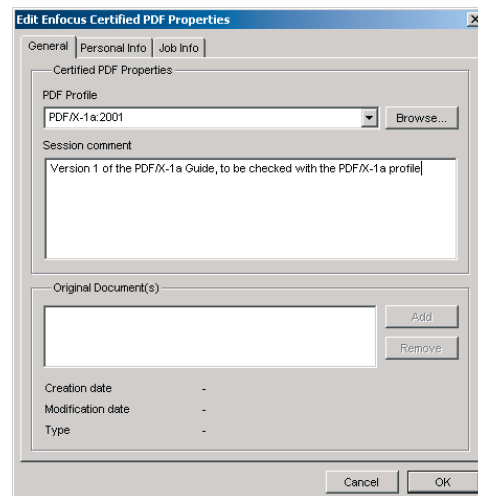
The Certified PDF mechanism in Enfocus PitStop Professional enables you to enhance the quality of your PDF workflow by adding comments to the edit log. Before sending your PDF document to the publisher for example, you may want to explain why given changes have been made.

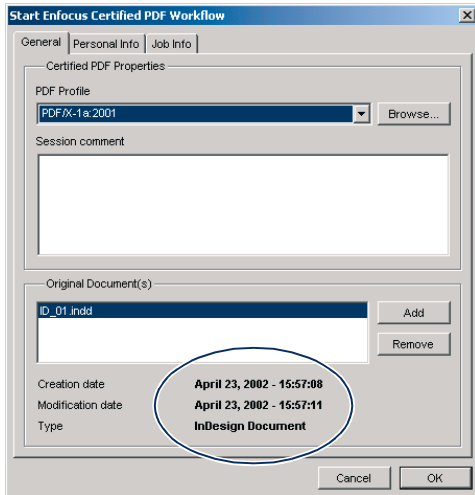
You can add comment per editing session. A session is the time in which you edit and save a PDF document.

Job Info

Enfocus Certified PDF documents can be provided with job information. Job information can be any kind of information about the PDF document which you would like to share with the person who will receive the PDF document. This can include, for example:

- The name, company address and contact details for whom the PDF document is (ultimately) intended.
- Any additional remarks which the recipient of the PDF document has to know. This can be, e.g., details about how the PDF document should be printed or what should happen next with the PDF document.





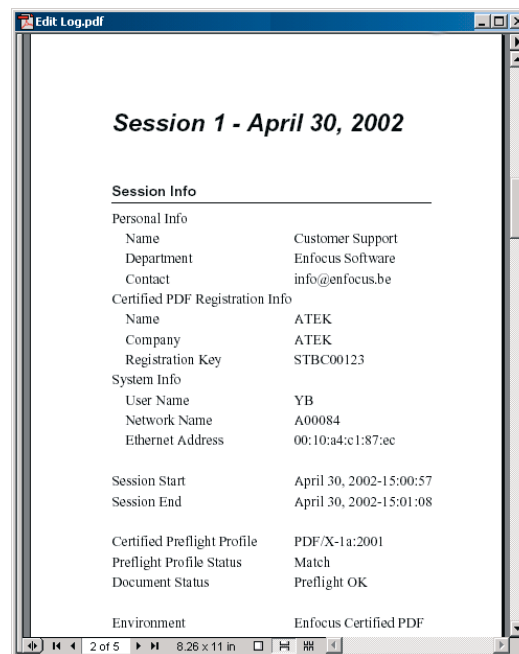
References to the original source document

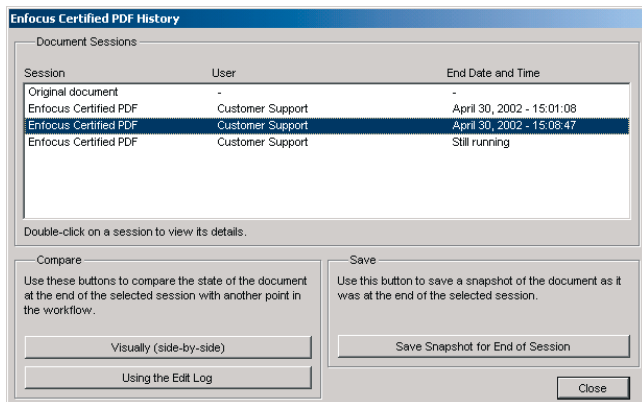
You can add references in your Certified PDF document to one or more source files on which the PDF file was based. This does not only offer you or the PDF recipient a convenient way to find the respective source files, it also enables you to check whether these source files have changed since the time at which the Certified PDF workflow was started for this PDF document. Indeed, if you wish to "synchronize" the source file with the edited PDF document, you will use the edit log report to apply the changes from the PDF document in the source document. It is then crucial to know that you are working in the correct version of the source file.

The edit log file

The Certified PDF mechanism in Enfocus PitStop Professional keeps a record of every editing session of a Certified PDF document. Thus, all the changes made to the PDF document are logged chronologically in the PDF document. The changes can be logged in two different ways, depending on the tool they were made with:

- If you edit your PDF document with any of the Enfocus Certified PDF compliant plug-ins, such as Enfocus PitStop Professional or Enfocus PowerUp PDF, the changes are immediately saved in the edit log file. The edit log file will contain a detailed entry for each of the changes.
- If you edit your PDF document with non-compliant third-party PDF editing tools, Enfocus PitStop Professional will intercept and log them. However, the edit log file will contain no details on the changes nor on the product with which the changes were made.





Document history

The Certified PDF mechanism in Enfocus PitStop Professional allows you to consult the history of your PDF document. This means that you can view a chronological list of all the sessions that your Certified PDF document has run through.

The chronological list of sessions contains the following information:

- The Certified PDF product that "stamped" the session
- The person or company responsible for the session
- The end date and time of the session

At this point, you can compare sessions or save a session as a snapshot:

- Comparing two versions of your PDF document visually is useful to see visible changes "at a glance". The idea is that you select two sessions and click a Compare Visually button. Enfocus PitStop Professional will then generate two snapshots showing the state of the PDF document at the end of the respective sessions and present these snapshots side by side on screen.
- A snapshot is a visual representation of the state of a PDF document at the time it was saved after an editing session. You save a snapshot to revert to a previous version of your PDF document. However, you do not necessarily have to save this snapshot at the end of each session. You can simply select any session from a list and save its snapshot at any stage in your workflow.

The Preflight Report

Two types of problems

When a PDF document has been subjected to a preflight check, you receive a preflight report. This preflight report is a PDF document and consists of the following chapters:

Chapter	Contents
Errors and Cautions	(potential) problems according to the selected PDF Profile
General File Information	information about the current PDF document, such as title, author, profile used, data format, etc.
Font Information	all fonts used in the PDF document, along with their attributes (type of font, embedded or subset, etc.)
Color Information	all color spaces (RGB, CMYK, etc.) used in the PDF document, with additional information where required
Image Information	all images in the PDF document, along with additional information (e.g. physical and effective resolution, page, angle, custom color functions, etc.)
OPI Information	OPI usage in the PDF document

The first page of the preflight report contains a list of problems detected in the PDF document. A reported problem is not necessarily an error. If the PDF document does not meet a given criterion in the PDF Profile, an error level will be assigned to the problem and it will be reported as such, i.e.:

Errors & Cautions

Severity	Description
* Error	Font Palatino-Bold is not embedded
x Error	Image without Filter found
x Error	Text does not knock-out
x Error	Page 17 is empty
* Caution	Changed Producer to Unknown
* Caution	Image compression changed

- as "Error"
- as "Information", preceded by the label "Caution"

Information (Caution)

A problem reported as "Information" (preceded by the label "Caution") is not necessarily a problem. It rather indicates a specific property of the PDF document which requires your special attention.

For example, one of the checks in the profiles is "Page is empty". This criterion it itself is not crucial: it does not make a PDF document unsuitable for print if the PDF document still contains blank pages. The "Caution" in the report, however, will draw your attention to the fact that the PDF document contains empty pages and you can check whether these pages are really necessary or delete them if they are not.

Errors

If the preflight report contains errors, the PDF document is definitely not ready for output. You can use the report to detect the errors and correct them, either in the PDF document or in the source files.

For example, you will get errors if the PDF document contains RGB colors and if it is checked with a profile for four-color offset printing. Enfocus PitStop Professional offers a convenient way to correct this error in the PDF document itself. Moreover, it is a lot easier to correct color-related errors like these in the PDF document itself than in the source file(s). You can use the Global Change feature or an Action List in Enfocus PitStop Professional.

In some cases, the error is automatically corrected by a "fix" the PDF/X-1a profile. The report will tell you how the problem has been resolved, e.g. by means of messages like "Objects compressed" or "Converted color". If problems have been resolved automatically by one of the PDF/X-1a profiles, the corresponding message will be described in this Ultimate PDF/X Guide.

Quick-find lists

This Ultimate PDF/X Guide provides an overview of all the error messages that may appear in the preflight report when a PDF document has been checked against one of the PDF/X-1a profiles. You will find a description of what caused the problem and a number of tips to resolve the problem. You can quickly find an error message in this guide by means of the quick-find lists. See ["Description of the Errors and Cautions in the PDF Reports"](#) on page 127.

Chapter 2: Creating Enfocus Certified PDF/X-1a Files from within Your Design Application

Topics

This chapter deals with the following topics:

- ["Creating an Instant PDF queue" on page 84](#)
- ["Creating an Enfocus Certified PDF document with Enfocus Instant PDF" on page 88](#)
- ["Using Adobe Acrobat Distiller Server and Enfocus PitStop Server to Create a Certified PDF Document" on page 93](#)

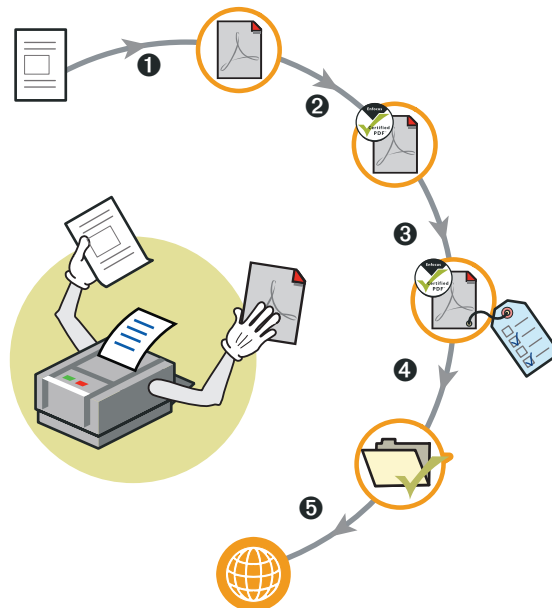
Creating an Instant PDF queue

What is an Instant PDF queue and what does it do?

An Instant PDF queue is a complete workflow scenario containing the following tasks:

- 1 Converting a source document into a PDF document using Acrobat Distiller Job Options which are derived from the PDF/X profile
- 2 Starting an Enfocus Certified PDF workflow for the PDF document
- 3 Preflighting the PDF document
- 4 Saving the PDF document on a specific location
- 5 Sending the document via e-mail or FTP

An Instant PDF queue is like a “virtual printer”: the name of the queue appears on your computer in the Printers list or on your desktop. You also print your source documents to an Instant PDF queue the same way you would print them on a regular printer. But this is not altogether true. In reality, you start a complete workflow by clicking Print.



What does an Instant PDF queue consist of?

An Instant PDF queue is a collection of the following components:

- A name
- A printer driver
- A profile

An Instant PDF queue can also contain the following information:

- The name and the contact details of the document designer
- The name, the contact details and the e-mail address of the recipient of the document
- The necessary details to automatically send the PDF document via FTP
- A description about the Instant PDF queue
- Job information

Checking before creating an Instant PDF queue

To create a new Instant PDF queue, the following must be installed on your computer:

- A PostScript driver, like for example Adobe PS Generic PostScript Printer
- The Adobe Acrobat program.

You also need the PDF/X-1a profiles.

Method

To create an Instant PDF queue, proceed as follows:

1 Choose File > Preferences > Enfocus Instant PDF (Acrobat 4) or Edit > Preferences > Enfocus Instant PDF (Acrobat 5) and check whether the following information is filled in:

- The PostScript driver, like for example Acrobat Distiller
- The location where Acrobat Distiller is installed on your computer.

Tip: The Acrobat Distiller driver has been installed on your computer together with Adobe Acrobat and is suitable in most cases. You will find the latest versions of the PostScript drivers on Adobe's site (www.adobe.com/products/printerdrivers).

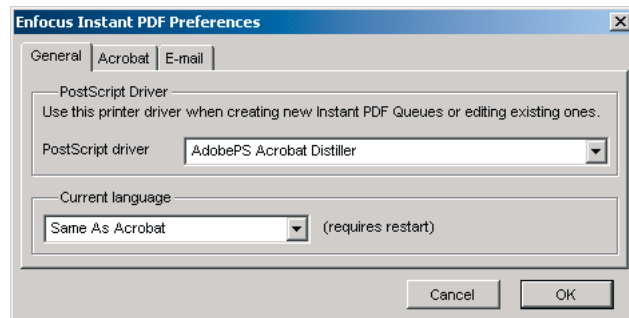
2 Choose Certified PDF > Show Personal Info and fill in all the data.

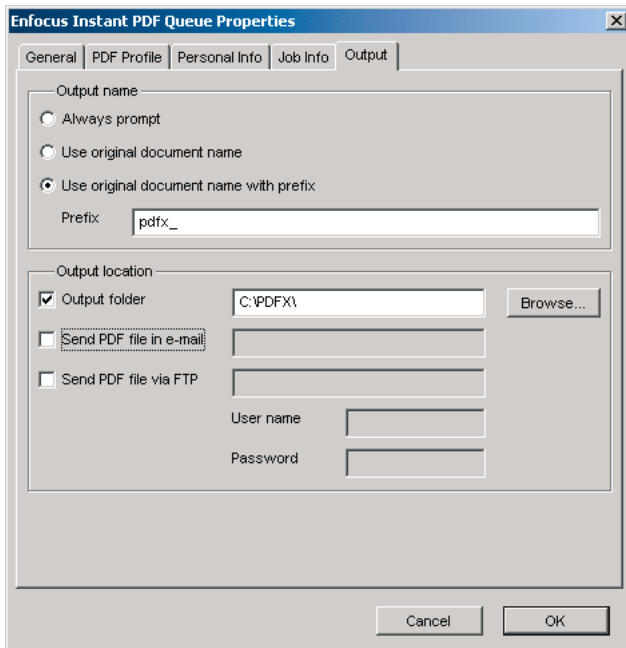
3 Choose Certified PDF > Show Instant PDF Queues.

4 Click New.

5 Fill in a name and a description of the Instant PDF queue.

6 Click the PDF Profile tab and choose a PDF/X-1a profile.





7 If necessary, you can change or complete part of the personal or job information

8 Click the Output tab and specify the name and location of your PDF document.

9 Click OK.

The name of the Instant PDF queue appears in the Enfocus Instant PDF Queues dialog box and:

- In the Printers list of Control Panel (Windows)
- On your desktop (Macintosh).

Creating an Enfocus Certified PDF document with Enfocus Instant PDF

About printer drivers, PPDs and Instant PDF Queues

When you create and set up an Instant PDF queue, you will also use a default printer driver for this queue. It is important that you have a good understanding of what printer drivers and PPDs are and can do, because they will very much contribute to the quality and look of your PDF document.

You find a brief description of printer drivers and PPDs below. For more detailed information about printer drivers and the most recent versions, please visit the Adobe Web site (www.adobe.com/products/printerdrivers).

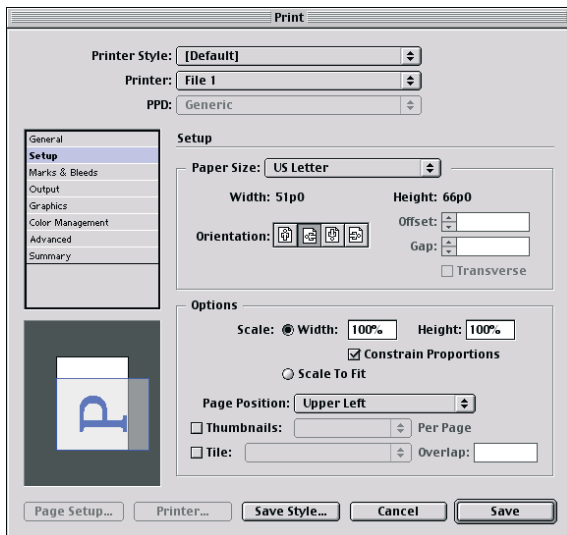
Printer drivers

Every printer which you install on your computer system has a printer driver. A printer driver is a utility that enables your applications, e.g. authoring or (graphic) design programs, to control the printer. Basically, a printer driver is necessary to transfer the data from your applications to the printer correctly.

AdobePS is an example of a PostScript printer driver.

PostScript Printer Description Files (PPD)

A PostScript printer does not only have a printer driver, but also a PostScript printer description file, abbreviated as PPD. Thanks to a PPD, you can access printer-specific features from within your authoring or design program.



For example, if you have a high-volume laser printer which can print pages double-sided to a mailbox and staple these sets, you will be able to select these options when you print a file. The PPD will present these options in a graphical user interface, as shown in the example.

In Microsoft Windows, a PostScript printer driver is always linked to a PPD. On the Macintosh, you can use different PPDs with the same printer driver.

Acrobat Distiller versus Acrobat Distiller

Confusion can arise when we talk about Acrobat Distiller. Indeed, Acrobat Distiller is not only the name of the application you use to convert PostScript files into PDF files, it is also an example of a PPD. In this Ultimate PDF/X Guide, we will consistently mention the terms “Acrobat Distiller printer driver” on the one hand and “the program Acrobat Distiller” on the other.

Creating Certified PDF documents the Enfocus way: the one-step process to an output-ready PDF file

Creating output-ready PDF documents the conventional way, i.e. without Enfocus Instant PDF, is not always easy. You have to change or check a large number of parameters in various software programs and at various stages in the process. And you may have to do this every time you create a new PDF document.

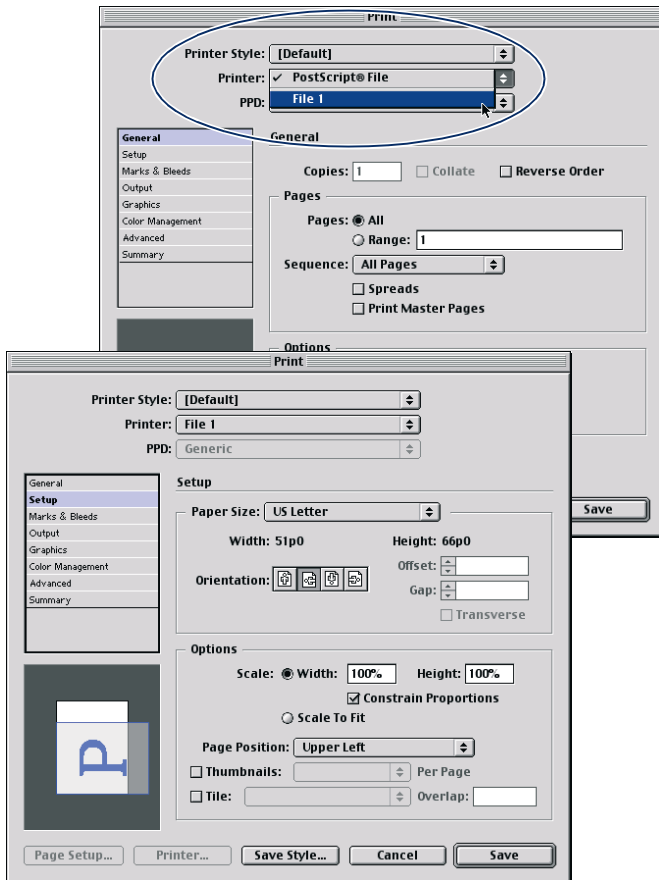
Moreover, what makes a PDF document “correct” or “output-ready”? A PDF document which looks okay on your computer screen is not necessarily output-ready. Only Enfocus Certified PDF documents which have been subjected to a preflight check with one of the PDF/X-1a profiles can offer this guarantee.

Enfocus Instant PDF allows you to create Enfocus Certified PDF documents which are output-ready. And you can create them in no time: in fact, you just have to print your document to an Instant PDF queue. The rest will occur automatically.

Method

To create an Enfocus Certified PDF document, proceed as follows:

- 1 Open your source document in the software program in which it has been created, e.g. QuarkXPress or Adobe InDesign.



2 Check the print settings in the original software program, e.g. settings related to page size, color and image resolution.

3 Print your document to an Instant PDF queue.

An output-ready Enfocus Certified PDF document is created automatically in the following steps:

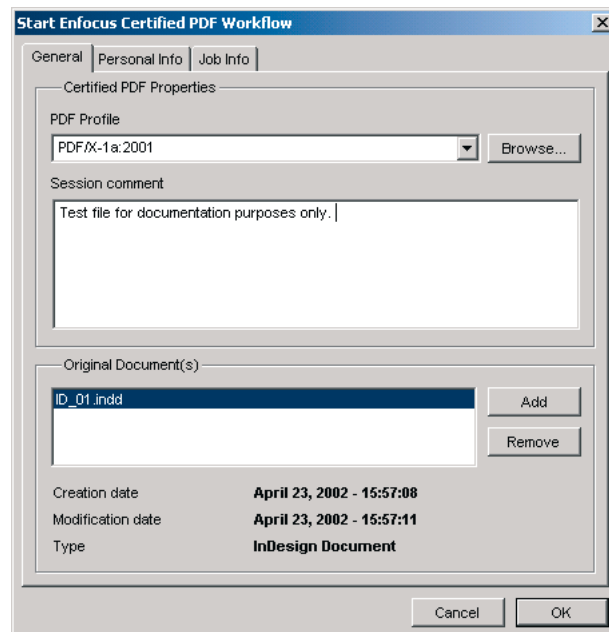
1 Your source document is converted to a PDF document using Acrobat Distiller Job Options which are derived from the PDF/X profile.

2 The PDF document is opened in Adobe Acrobat.

3 An Enfocus Certified PDF workflow is started for the PDF document and the Start Enfocus Certified PDF Workflow appears in Adobe Acrobat. If necessary, you can add a reference to one of more source document(s), fill in or change the personal information or job information. When finished, click OK.

4 The PDF document is subjected to a preflight check against the PDF/X-1a profile which is linked to the Instant PDF queue:

- If the PDF document meets all the criteria of the profile, it saved in the folder which you have specified in the Instant PDF queue. It can also be sent automatically by e-mail or FTP to a recipient which you have specified when you created the queue.
- If the PDF document contains errors, they will be reported as error or information in the preflight report and the PDF document will stay open in Adobe Acrobat. You can use the preflight report to make the necessary corrections in your source document or in the PDF document. The cautions or errors listed in the reports contain hypertext links. You can click them to display the location of the respective caution or error.



Using Adobe Acrobat Distiller Server and Enfocus PitStop Server to Create a Certified PDF Document

Description

Using Adobe Acrobat Distiller Server in combination with Enfocus PitStop Server is the ideal solution if you have to create Certified PDF/X-1a documents in batch. You may wish to do this for a number of reasons:

- To relieve the workstation of the document designer to create the PostScript file.
- To use the performance and resources of the server to process large files which may be impossible to process on less powerful workstations.
- To centralize the setup and management of the PDF creation process.

Setting up such a configuration requires a certain level of computer literacy. Configuring the Job Options of Acrobat Distiller, e.g., may be quite technical and complicated.

The configuration depends on the software and hardware platform and therefore, the installation cannot be explained at length in this Ultimate PDF/X Guide. Please refer to our knowledge base article on the Enfocus Web site for a detailed description. You find this article on www.enfocus.com > Support > Knowledge Base. Select the product PitStop Server and open the article "Configuring Distiller Server and PitStop Server to create Enfocus Certified PDF documents."

Method

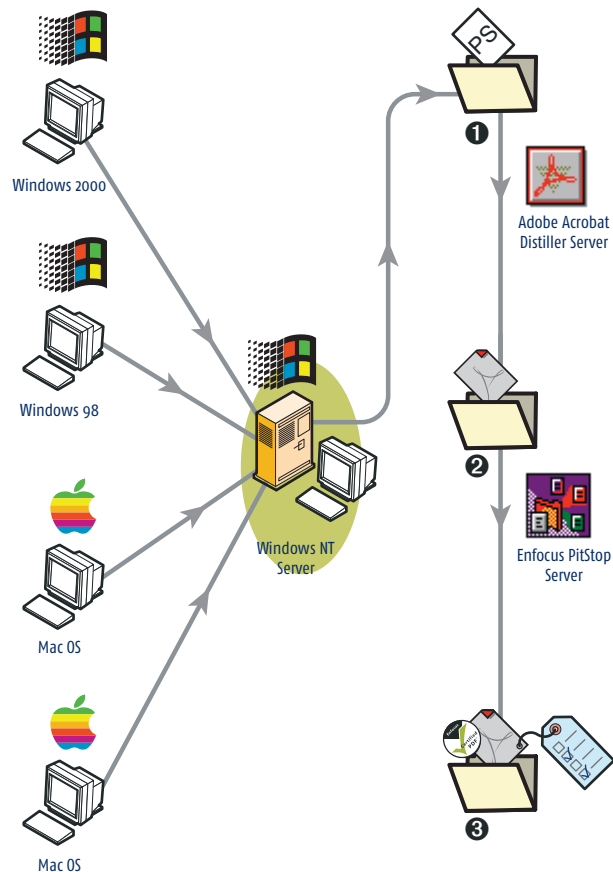
The system administrator has to create a workflow (or “queue”) on the server and specify a number of processing instructions. He or she can do this as follows:

1 Create and configure a “drop folder” on the server.

The users will save their PostScript files in this drop folder to create PDF documents with processing instructions which are specific for this queue. For more information about creating processing files, please refer to the user guide of your authoring or design software.

2 Create an input hot folder for Adobe Acrobat Distiller Server and specify the job options, the output folder and other properties. Refer to our knowledge base article mentioned above for technical details.

The “In” folder of Distiller Server corresponds to the drop folder. As soon as Distiller Server finds a PostScript file in the “In” folder, it will convert it to a PDF document and move this file to the “Out” folder.



3 Configure a hot folder for Enfocus PitStop Server and specify a PDF Profile and the various output folders, depending on the processing result (OK, error or information). Also select the option to make incoming PDF documents Enfocus Certified.

The input folder of the hot folder corresponds to the "Out" folder of Distiller Server.

Chapter 3: Creating Enfocus Certified PDF/X-1a Document from Existing PDF Documents

Topics

This chapter deals with the following topics:

- ["Starting an Enfocus Certified PDF Workflow for a PDF Document"](#) on page 97
- ["Checking the Enfocus Certified PDF Workflow Status"](#) on page 99

Starting an Enfocus Certified PDF Workflow for a PDF Document

Description

When you have started an Enfocus Certified PDF workflow for a PDF document, you can enrich it with Enfocus Certified PDF information, i.e.:


- A reference to one or more source document
- An embedded PDF Profile
- Comment about a given "session", i.e. each time you open, edit and save a PDF document

Moreover, all modifications, preflight checks and even different versions are saved in the PDF document, so that you can always consult them later or even revert to one of the previously saved versions.

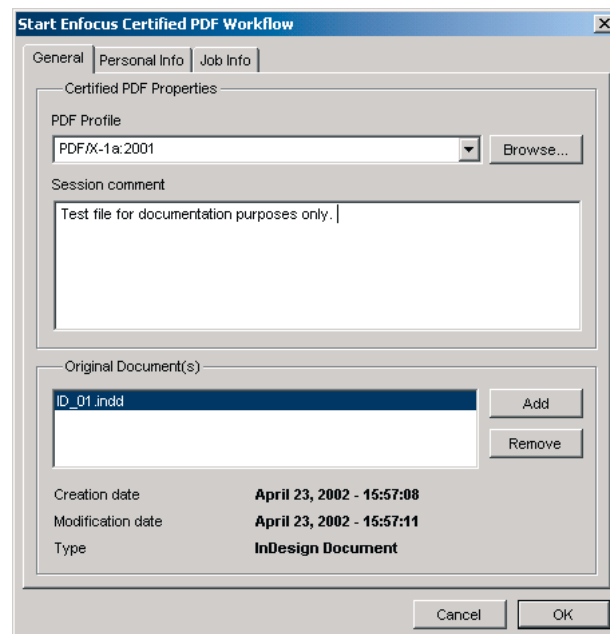
Method

Proceed as follows to start an Enfocus Certified PDF workflow for a PDF document:



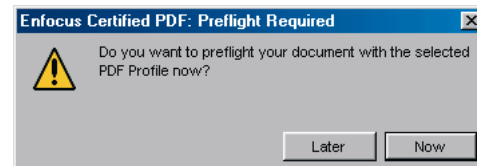
- 1 Open the PDF document in Adobe Acrobat.
- 2 Choose Certified PDF > Start or click the  button.

3 Select a PDF/X-1a profile. You can also add a reference to one or more source files and add comments about the present session.



4 A dialog box appears prompting you to preflight your PDF document later or now. Click the Now button

A preflight check is performed on the PDF document and a preflight report appears. You can use this preflight report to make the required corrections in the PDF document or in the original source files.



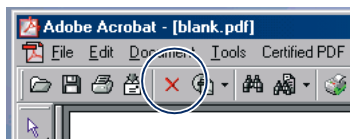
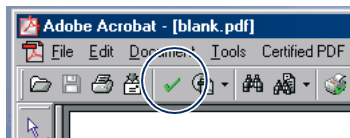
Checking the Enfocus Certified PDF Workflow Status





Description

The Enfocus Certified PDF status button ( ,  or ) shows you the status of a PDF document in the Enfocus Certified PDF workflow at a glance. You can find this button in the File toolbar of Adobe Acrobat.

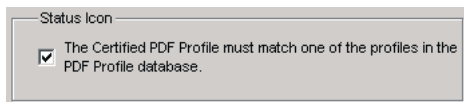
Method

Proceed as follows to check the Enfocus Certified PDF workflow status of a PDF document:

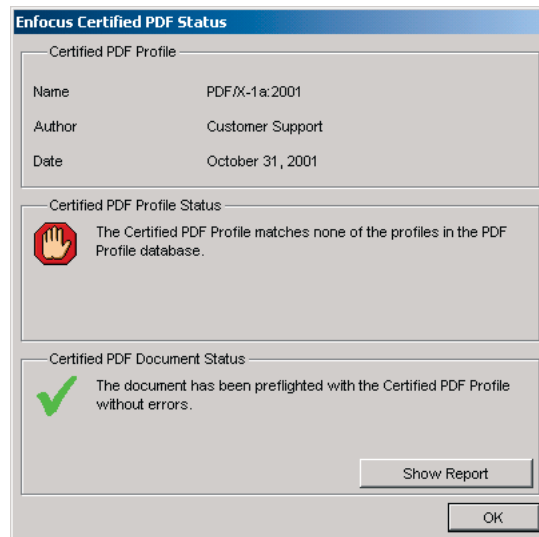


- 1 Open a PDF document in Adobe Acrobat.
- 2 Check the Enfocus Certified PDF status button in the File toolbar of Adobe Acrobat:
 - If the button looks like this  , it means that the Enfocus Certified PDF workflow has not been started yet for the PDF document. Click this button to start the workflow. See also ["Starting an Enfocus Certified PDF Workflow for a PDF Document"](#) on page 97.
 - If the icon shows a green check mark  , it means that the PDF Profile and its result are correct. The PDF document complies with the PDF/X profile.
 - If the button shows a red cross  , it means that the PDF document is not ready for output. Proceed with step 3.
- 3 Click the red cross button () to find the cause of the problem:

- The Enfocus Certified PDF profile embedded in the PDF document does not correspond to one of the PDF/X-1a profiles in your Enfocus PitStop PDF Profile Control Panel. Choose Certified PDF > Edit Properties and select one of the PDF/X-1a profiles in the list. These are the same profiles which you find in the Enfocus PitStop PDF Profile Control Panel. If Enfocus PitStop Professional is not installed on your computer, you can disable this comparison of the PDF Profiles in the Preferences. Choose File (Acrobat 4) or Edit (Acrobat 5) > Preferences, Enfocus Certified PDF and make sure the corresponding option is cleared.



- The PDF document has not been preflighted yet, or it has been preflighted and contains errors. Click Show Report and use the report to make the necessary corrections in the PDF document or in the original source file.



Chapter 4: Receiving Enfocus Certified PDF/X-1a Documents

Topics

This chapter deals with the following topics:

- ["Checking Enfocus Certified PDF Files"](#) on page 102
- ["Checking the PDF Documents Interactively with Enfocus PitStop Professional"](#) on page 105
- ["Checking the PDF Documents Automatically with Enfocus PitStop Server"](#) on page 109
- ["Resolving Reported Problems"](#) on page 115

Checking Enfocus Certified PDF Files



Description

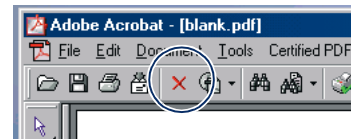
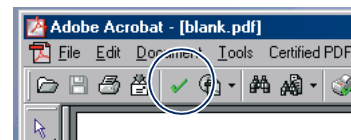
If you receive PDF “Enfocus Certified” files from your client, you can use them confidently. The term “Enfocus Certified PDF” is a guarantee of quality.

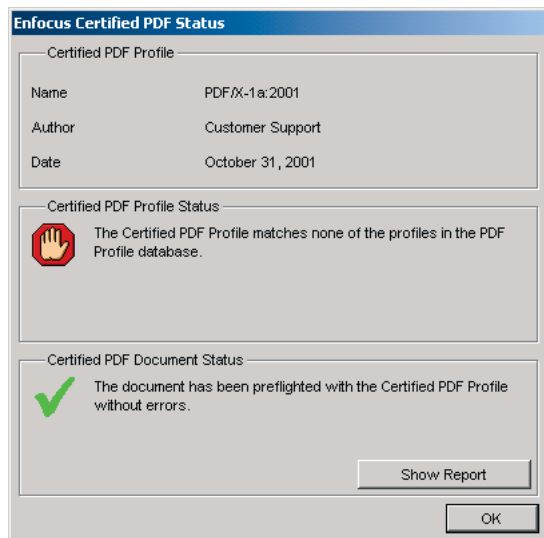
Normally, you only have to check the status of Certified PDF files. It directly appears via the Enfocus Certified PDF Status Icon on the Adobe Acrobat toolbar. If you use Enfocus PitStop Server, this check happens automatically (see [“Checking the PDF Documents Automatically with Enfocus PitStop Server”](#) on page 109).


Method

To check the status of a document in an Enfocus Certified PDF workflow, proceed as follows:

- 1 Open the PDF document in Adobe Acrobat.
- 2 Check the Enfocus Certified PDF Status Icon above in the toolbar:
 - If the icon shows a green check mark , it means that the PDF Profile and its result are correct. The PDF document complies with the PDF/X profile.
 - If the icon shows a red cross , the document is not yet output-ready. Proceed with step 3.



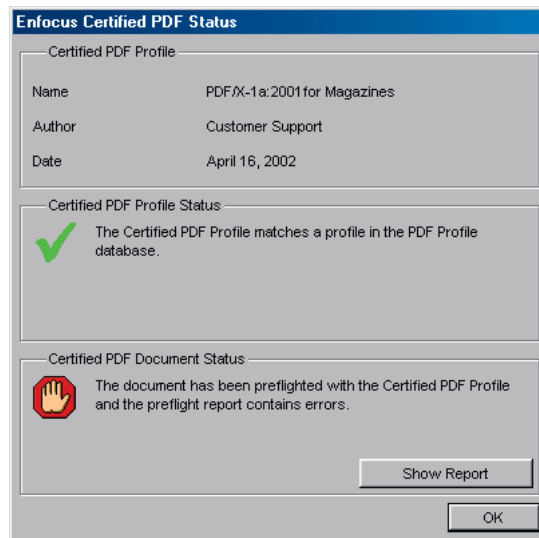


If the screen displays this icon , it means no Enfocus Certified PDF workflow has yet been launched for the current document. Click the icon to start the Enfocus Certified PDF workflow.

3 Click the red cross icon  to check the cause of the problem:

- The embedded Enfocus Certified PDF Profile does not match one of the PDF Profiles in the Enfocus PDF control panel. Choose Certified Workflow and Edit Properties and click a PDF Profile in the Enfocus PDF control panel. If Enfocus PitStop Professional is not installed, you can deactivate this additional check of the profiles via Preferences. Choose File (Acrobat 4) or Edit (Acrobat 5) and click Preferences, Enfocus Certified PDF and make sure the selection is not checked ("The Certified PDF Profile has to match one of those in the database of the PDF Profiles").

- The document has not yet been checked or has been checked but contains errors. Click Show Report and edit the PDF document. If necessary, send the PDF document back to its author together with the report so that he can edit the original documents and deliver a new PDF file. If you can modify the Enfocus Certified PDF document, you should still send the corrected PDF file to its author. He can then precisely check which modifications were made thanks to the compare functions of Enfocus Certified PDF: "Visually" and "Using the Edit Log", which are accessible via the History button in the Certified PDF menu. This will enable him to edit the original documents in the same way, so that the same errors do not occur in later versions.

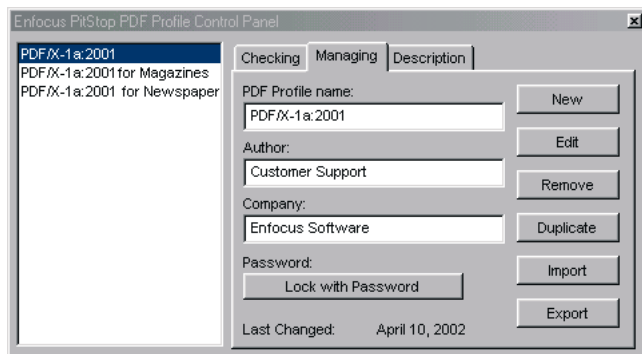


Checking the PDF Documents Interactively with Enfocus PitStop Professional

Description

Enfocus PitStop Professional enables you to perform an interactive preflight check on a PDF document. This means you will open the PDF document in Adobe Acrobat and check some of its properties with a predefined PDF Profile. You can then use the report to correct the errors or make the author correct them.

Method

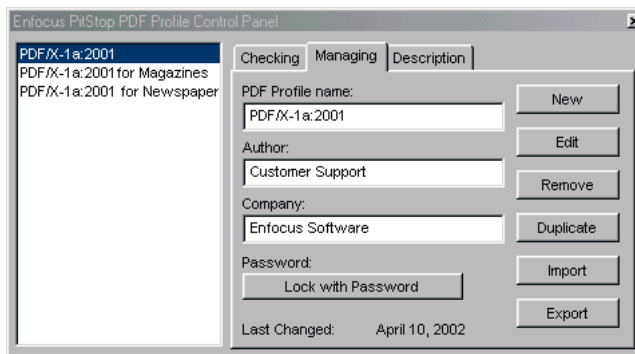
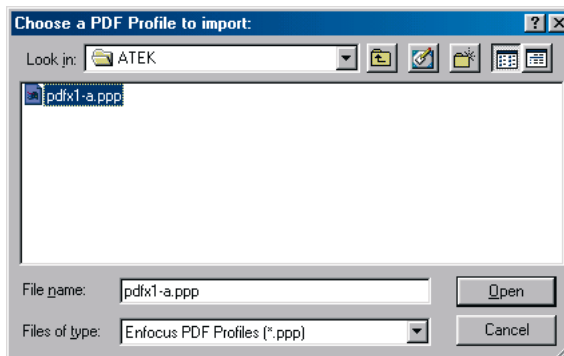


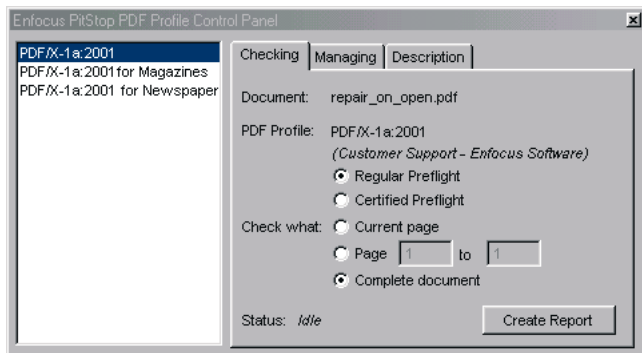
To check a PDF document interactively, proceed as follows:

- 1 Open the PDF document which has to be checked.
- 2 Select the Window menu and choose Pitstop Preflight Control Panel.
- 3 In the Administration tab, click Import.

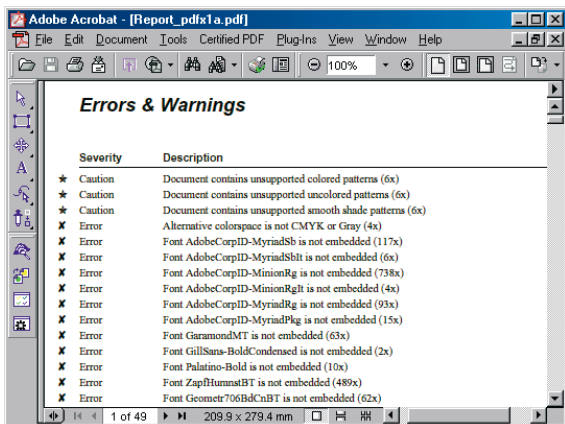
- 4 Select the profile you want to check the PDF document with and click Open.

The profile appears in the Enfocus PDF Control Panel.





5 In the Executing tab, click Create Report. The PDF document is checked and the report is displayed. You can use this report to correct the errors or make the author correct them.



Detection of errors in the preflight report

The report may not contain any error. If the preflighting finds some errors in the PDF document, the author will have to correct them via his design program or directly in the PDF document with Enfocus PitStop Professional. The cautions or errors listed in the reports contain hypertext links. You can click them to display the location of the respective caution or error.

Printing a document

Unless you have a PDF workflow, Adobe Acrobat is not enough to send a PDF document to the image setter with the right printer, color separation and overprint settings. You need additional tools. Check your prepress provider for more information.

Checking the PDF Documents Automatically with Enfocus PitStop Server

Description

Enfocus PitStop Server enables you to check your PDF documents automatically. You only need to create a hot folder in which you include one of the PDF/X profiles. As soon as a PDF document is put into an input folder of the hot folder, it is automatically checked and, depending on the result of this preflighting, moved to one of the output folders:

- The OK folder, if the PDF document does not contain any errors but maybe warnings, meaning that it is output-ready
- The error folder, if the PDF document contains errors, meaning that it is not output-ready

Method

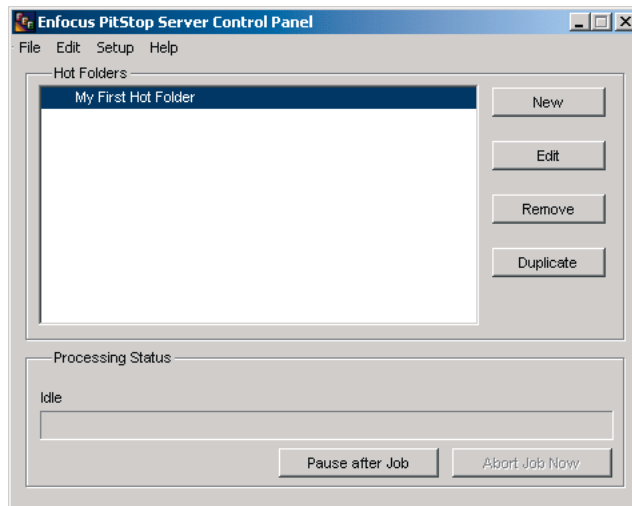
To check your PDF documents automatically, proceed as follows:

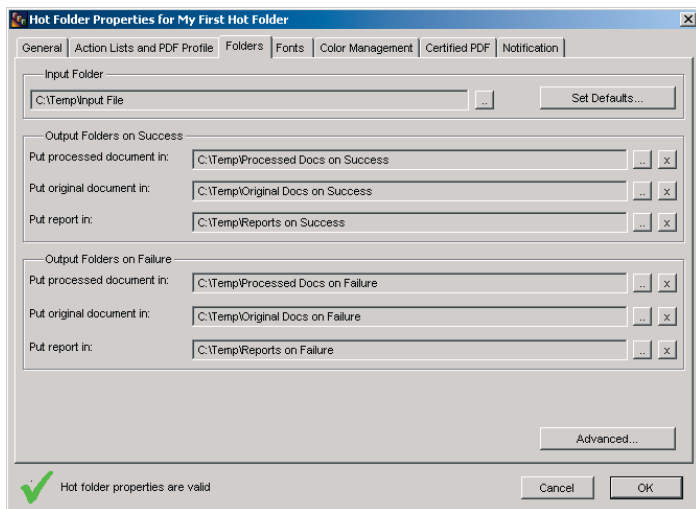
1 Create the following folders in Explorer (Windows) or Finder (Macintosh):


- An Input folder for the incoming PDF documents
- An OK folder for the PDF documents that are output-ready, without any errors
- An Error folder for the PDF documents containing errors
- An Originals folder for the original versions of the incoming PDF documents
- A folder for reports on PDF documents which were processed successfully and which are thus output-ready
- A folder for reports on PDF document which contain errors

2 In the Enfocus PitStop Server Control Panel, click New to create a new hot folder.

3 Name your hot folder and, if necessary, fill in a description in the Description area of the hot folder.

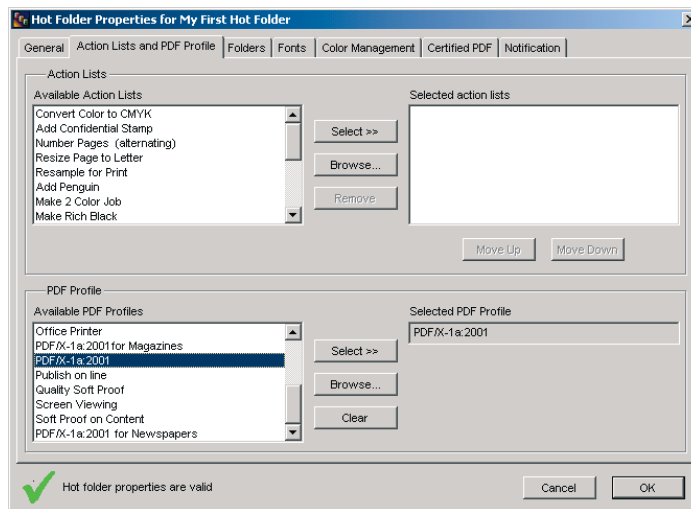


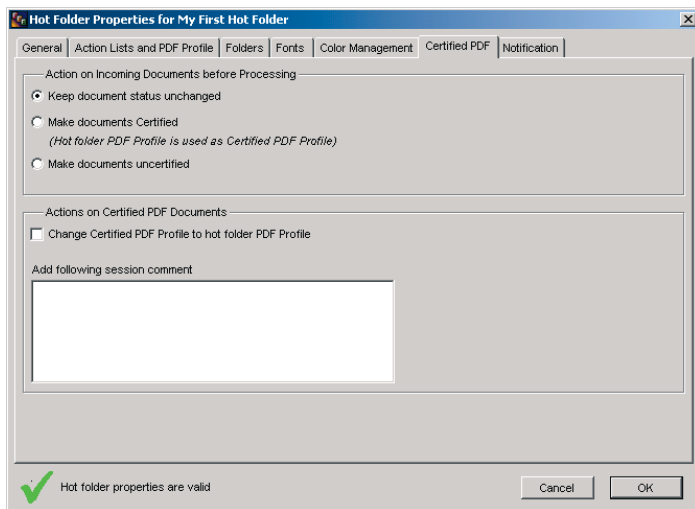


- 4 Display the Folders tab and specify the input folder and the output folders.
- 5 Click the  button and specify the required folders.

6 Click the Action List and PDF Profile tab to add one of the PDF/X profiles.

7 Select a PDF/X profile in the list of available PDF Profiles and click Select.





8 If necessary, click the Certified PDF tab.

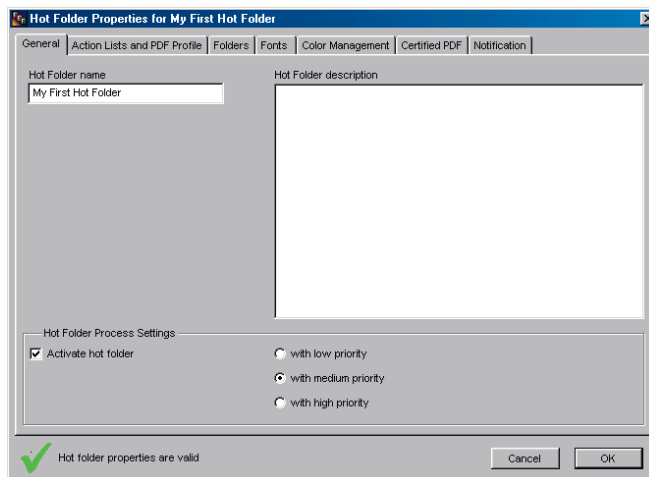
Select either one of the following options:

- Click Change Certified PDF Profile to hot folder PDF Profile to use the PDF Profile of the hot folder instead of the Enfocis Certified PDF profile embedded in the PDF document.
- Select Make document Certified to start an Enfocis Certified PDF workflow for incoming non-certified PDF documents. These documents are enriched with Enfocis Certified PDF information and get the PDF Profile of the hot folder embedded.

Tip: You can select not to certify the documents only to save the PDF document as if it was a new document: without Enfocis Certified PDF information and without profile or preflighting report. But we advise you not to do so at this stage.

9 Display the general properties, click Activate hot folder and select a priority level. Each PDF document in the input folder of the hot folder is automatically compared to the PDF Profile of this hot folder or to the embedded profile. The PDF document will be moved to the right folder depending on the result of the preflighting.

- The documents in the OK folder are output-ready
- The documents in the error folder contain errors. You can handle these documents yourself or send them back to the author together with the error reports so that he can correct them.



Resolving Reported Problems

Problems in the PDF document which have been detected by the PDF Profiles may affect the following stages in the workflow:

- The PDF document may not pass through the workflow.
- The PDF document or the original files may need to be corrected.

Ideally, you send the PDF document provider an Enfocus Certified PDF document with its preflight report and let the document designer take care of the required corrections in the PDF document. An Enfocus Certified PDF document enables the document designer to keep track of all the changes done in a PDF document. This Ultimate PDF/X Guide offers the document designer an explanation of and a solution to each problem. The designer can make the necessary corrections in the original source files.

Another option is to make the corrections in the PDF document by using Enfocus PitStop Professional. This may even be a better option in some cases, such as performing global color changes in various objects (text and graphics) which may have been created in a variety of software products and assembled in a single document. Sometimes, it may even be necessary to meet the deadline or simply because you do not have the time to find and edit the original source files. If so, bear in mind that the corrections are only done in the PDF documents and not in the original source files. Some “post-synchronization” may be necessary between the PDF documents and the original source files: the original source files have to be corrected correspondingly.

This Ultimate PDF/X Guide presents an overview of all the error messages that may appear in a preflight report after a preflight check has been performed with one of the PDF/X-1a profiles. Each error messages provides a detailed description of the problem and a procedure or tips to resolve it. You can easily find a description of a specific error in this Ultimate PDF/X Guide by means of the quick-find lists. See [“Description of the Errors and Cautions in the PDF Reports”](#) on page 127.

Part 4: Beyond PDF/X

Introduction

When the PDF/X standards were created, they addressed a 'common' set of issues across many different print publishing disciplines. These include magazine, newspaper, book, commercial, packaging, etc. However, each of these disciplines may have very specific production requirements that need to be addressed separately, and go Beyond the PDF/X specifications.

In fact, even within each of the disciplines there may be different requirements. Other than the issue of CMYK vs. Device Independent Color which are addressed in the PDF/X-1a vs. PDF/X-3 specifications respectively, these requirements could be things like image resolution, maximum density, specific page sizes, etc.

While the common issues are covered in the various PDF/X specifications, the other more application or discipline specific issues need to be addressed through a combination of the use of different software tools, settings, and operator training.

Generally, the industry is moving toward identifying these additional settings and setting files as *PDF/X Plus*. For example, you may see these settings and setting files with names like; PDF/X Plus for Magazines, PDF/X Plus for Commercial Printing, or PDF/X Plus for Flexo Packaging, etc.

Please note that the following section includes some examples of PDF/X Plus setting files (profiles) that were developed for use with Enfocus products, however similar setting files will also be available from many of the other PDF/X solution providers.

Be sure to ask your output provider for setting files or individual settings that will address these production needs that beyond PDF/X to ensure a successful print publishing process.

Topics

This part deals with the following topics:

- ["PDF/X Plus"](#) on page 119
- ["PDF/X Plus Magazines Recommendations"](#) on page 120
- ["PDF/X Plus Newspapers Recommendations"](#) on page 122
- ["PDF/X Plus Commercial Printing Recommendations"](#) on page 124
- ["Reporting of Errors and Cautions Using PDF/X Plus Profiles"](#) on page 126

PDF/X Plus

Profiles

In order to further streamline the specific PDF workflows, Enfocus Software developed PDF/X Plus Profiles which add additional checks to the PDF/X-1a specifications. This will restrict the PDF file even more, ensuring perfect printability within a specific production environment.

Specific PDF/X Plus Profiles have been created for the following environments:

- Magazines
- Newspapers
- Commercial Printing

All three Profiles are, of course, fully compliant with the PDF/X-1a standard.

Additions

The following sections give a concise overview of the different checks that have been added to the PDF/X-1a requirements in order to meet the needs of the different production environments:

- ["PDF/X Plus Magazines Recommendations"](#) on page 120
- ["PDF/X Plus Newspapers Recommendations"](#) on page 122
- ["PDF/X Plus Commercial Printing Recommendations"](#) on page 124.

PDF/X Plus Magazines Recommendations

The following checks have been added to the PDF/X-1a PLUS Magazines v2 Profile in order to ensure perfect print-ability of your PDF documents in a magazine environment:

Generic PDF/X Plus checks	For more information, see...
Document Creator should not be Adobe PDFWriter	"Errors and Cautions of the Category "Document Info"" on page 160
Page Size should be equal	"Errors and Cautions of the Category "Page Size"" on page 169
Page Orientation should be equal	"Errors and Cautions of the Category "Page Size"" on page 169
Document should not contain more than 4 separations	"Errors and Cautions of the Category "Spot Color"" on page 184
Multiple Master and Double Byte fonts should not be used	"Errors and Cautions of the Category "Font Type"" on page 195
White text should be set to knock out	"Errors and Cautions of the Category "Text"" on page 201
Document should not contain annotations	"Errors and Cautions of the Category "Annotations"" on page 217

Magazine-specific checks	For more information, see...
Document should not contain more than one page	"Errors and Cautions of the Category "Page Info"" on page 170
Document should not contain TrueType fonts	"Errors and Cautions of the Category "Font Type"" on page 195
Text size should not be smaller than 5pt if it appears on one separation only	"Errors and Cautions of the Category "Text"" on page 201
Text size should not be smaller than 9pt if it appears on more than one separation	"Errors and Cautions of the Category "Text"" on page 201
Resolution of grayscale and color images should not be lower than 150 dpi	"Errors and Cautions of the Category "Image Resolution"" on page 210
Resolution of black-and-white images should not be lower than 600 dpi	"Errors and Cautions of the Category "Image Resolution"" on page 210
Ink coverage should not exceed 300%	"Errors and Cautions of the Category "Process Color"" on page 173

PDF/X Plus Newspapers Recommendations

The following checks have been added to the PDF/X-1a PLUS Newspapers v2 Profile in order to ensure perfect reproduction of your PDF documents in a newspaper printing environment:

Generic PDF/X Plus checks	For more information, see...
Document Creator should not be Adobe PDFWriter	"Errors and Cautions of the Category "Document Info"" on page 160
Page Size should be equal	"Errors and Cautions of the Category "Page Size"" on page 169
Page Orientation should be equal	"Errors and Cautions of the Category "Page Size"" on page 169
Document should not contain more than 4 separations	"Errors and Cautions of the Category "Spot Color"" on page 184
Multiple Master and Double Byte fonts should not be used	"Errors and Cautions of the Category "Font Type"" on page 195
White text should be set to knock out	"Errors and Cautions of the Category "Text"" on page 201
Document should not contain annotations	"Errors and Cautions of the Category "Annotations"" on page 217

Newspaper-specific checks	For more information, see...
Document should not contain more than one page	"Errors and Cautions of the Category "Page Info"" on page 170
Document should not contain TrueType fonts	"Errors and Cautions of the Category "Font Type"" on page 195
Text size should not be smaller than 8pt if it appears on one separation only	"Errors and Cautions of the Category "Text"" on page 201
Text size should not be smaller than 10pt if it appears on more than one separation	"Errors and Cautions of the Category "Text"" on page 201
Resolution of grayscale and color images should not be lower than 100 dpi	"Errors and Cautions of the Category "Image Resolution"" on page 210
Resolution of black-and-white images should not be lower than 600 dpi	"Errors and Cautions of the Category "Image Resolution"" on page 210
Ink coverage should not exceed 240%	"Errors and Cautions of the Category "Process Color"" on page 173

PDF/X Plus Commercial Printing Recommendations

The following checks have been added to the PDF/X-1a PLUS Commercial CMYK v1 Profile in order to ensure perfect reproduction of your PDF documents in a commercial printing environment:

Generic PDF/X Plus checks	For more information, see...
Document Creator should not be Adobe PDFWriter	"Errors and Cautions of the Category "Document Info"" on page 160
Page Size should be equal	"Errors and Cautions of the Category "Page Size"" on page 169
Page Orientation should be equal	"Errors and Cautions of the Category "Page Size"" on page 169
Document should not contain more than 4 separations	"Errors and Cautions of the Category "Spot Color"" on page 184
Multiple Master and Double Byte fonts should not be used	"Errors and Cautions of the Category "Font Type"" on page 195
White text should be set to knock out	"Errors and Cautions of the Category "Text"" on page 201
Document should not contain annotations	"Errors and Cautions of the Category "Annotations"" on page 217

Commercial printing-specific checks	For more information, see...
Text size should not be smaller than 5pt if it appears on one separation only	"Errors and Cautions of the Category "Text"" on page 201
Text size should not be smaller than 8pt if it appears on more than one separation	"Errors and Cautions of the Category "Text"" on page 201
Text should not use artificial bold style	"Errors and Cautions of the Category "Font Style"" on page 199
Resolution of grayscale and color images should not be lower than 150 dpi	"Errors and Cautions of the Category "Image Resolution"" on page 210
Resolution of black-and-white images should not be lower than 600 dpi	"Errors and Cautions of the Category "Image Resolution"" on page 210
Ink coverage should not exceed 340%	"Errors and Cautions of the Category "Process Color"" on page 173

Reporting of Errors and Cautions Using PDF/X Plus Profiles

Problems in the PDF document which have been detected by the PDF/X Plus Profiles may affect the following stages in the workflow:

- The PDF document may not pass through the workflow.
- The PDF document or the original files may need to be corrected.

Ideally, you send a PDF document to the provider, along with its preflight report, and let the document designer take care of the required corrections in the PDF document. This Ultimate PDF/X Guide offers the document designer an explanation of and a solution to each problem. The designer can make the necessary corrections in the original source files.

Another option is to make the corrections in the PDF document by using one of the many software solutions presented in this guide. This may even be a better option in some cases, such as performing global color changes in various objects (text and graphics) which may have been created in a variety of software products and assembled in a single document. Sometimes, it may even be necessary to meet the deadline or simply because you do not have the time to find and edit the original source files. If so, bear in mind that the corrections are only done in the PDF documents and not in the original source files. Some "post-synchronization" may be necessary between the PDF documents and the original source files: the original source files have to be corrected correspondingly.

This Ultimate PDF/X Guide presents an overview of all the error messages that may appear in a preflight report after a preflight check has been performed with one of the PDF/X-1a Profiles. Each error messages provides a detailed description of the problem and a procedure or tips to resolve it. You can easily find a description of a specific error in this Ultimate PDF/X Guide by means of the quick-find lists. See ["Description of the Errors and Cautions in the PDF Reports"](#) on page 127.

Part 5: Description of the Errors and Cautions in the PDF Reports

Introduction

This part lists the errors and cautions which may be reported when you execute one of the PDF/X profiles. Although these (potential) problems are described here in the context of Enfocus PDF/X profiles, they are not restricted to Enfocus workflows only: they may occur in any PDF-based workflow, using a variety of PDF/X software solutions. Check with your specific publisher or printer to ensure that these or any other settings or profiles do reflect their specific requirements prior to use.

You can use the quick-find lists to find the description of a specific error or caution.

Topics

You can find the quick-find lists for each of the PDF/X-1a profiles on the following pages:

- ["List of Errors and Cautions in the Profile PDF/X-1a:2001 v2"](#) on page 129
- ["List of Errors and Cautions in the Profile PDF/X-1a PLUS Magazines v2"](#) on page 131
- ["List of Errors and Cautions in the Profile PDF/X-1a PLUS Newspapers v2"](#) on page 135
- ["List of Errors and Cautions in the Profile PDF/X-1a PLUS Commercial CMYK v1"](#) on page 139
- ["List of Errors and Cautions by Category"](#) on page 143
- ["Alphabetical List of Errors and Cautions"](#) on page 151

List of Errors and Cautions in the Profile PDF/X-1a:2001 v2

Cautions

Document encoding changed to binary	[158]
Moved objects outside of printable area	[226]
Not all pages in the document have the same size	[169]
Removed actions	[221]
Spot color "X" and spot color "Y" have the same CMYK values	[187]
Text point size <n>, colored with 6 or more color plates, is less than 6.00 points	[202]

Errors

Alternative color space is not CMYK or Gray	[184]
Changed Page Box Layout to match the Press Layout specifications	[164]
Changed Title, Producer or Creator to Unknown	[160]
Changed trapped flag to false	[159]
Creation and/or Modification date info added	[161]
Custom transfer function removed	[189]
Document has security	[162]

Document needs repair on open	[158]
Font "X" has been embedded	[200]
Found objects with transparency settings	[194]
Halftone phases removed	[190]
Image compression changed	[215]
Process color – converted color	[173]
Removed alternate images	[211]
Removed OPI	[216]
Rendering intent removed	[189]

List of Errors and Cautions in the Profile PDF/X-1a PLUS Magazines v2

Cautions

Changed image resolution	[213]
Document encoding changed to binary	[158]
Font "X" is a TrueType font	[195]
Font "X" is a Type 3 font	[196]
Image is rotated	[208]
Indexed color is used	[182]
Invisible object removed	[207]
Not all pages in the document have the same size	[169]
Removed embedded PostScript fragment	[222]
Spot color "X" and spot color "Y" have the same CMYK values	[187]
Text point size <n> is less than 5.0	[201]
Text point size <n>, colored with 6 or more color plates, is less than 6.00 points	[202]
X and Y scaling of image differ 3 %	[209]

Errors

Alternative color space is not CMYK or Gray	[184]
Annotation lies inside printable area	[225]
Annotation setting changed to non-printing	[218]
Black text is set to overprint	[204]
Changed line width	[206]
Changed Page Box Layout to match the Press Layout specifications	[164]
Changed trapped flag to false	[159]
Custom black generation function removed	[193]
Custom halftone function removed	[191]
Custom transfer function removed	[189]
Custom undercolor removal function removed	[193]
Document contains actions	[220]
Document contains ambiguously defined spot colors	[184]
Document has security	[162]
Document needs repair on open	[158]
Effective resolution of color or grayscale images is less than 100 dpi, or, Effective resolution of single-bit black-and-white images is less than 600 dpi	[211]
Font "X" has been embedded	[200]

Font "X" is a MultipleMaster font	[196]
Font "X" uses an artificial bold, italic or outline style	[199]
Found objects with transparency settings	[194]
Halftone phases removed	[190]
Image compression changed	[215]
Image contains alternates that are default for printing	[210]
Invisible object removed	[205]
Number of nodes <n> in the single path is more than 500	[206]
Page <n> is empty	[170]
Process color – converted color	[173]
Removed annotation	[217]
Removed OPI	[216]
Renamed spot color	[188]
Rendering intent removed	[189]
Spot color – converted color	[188]
Text does not knock out	[205]
Total ink coverage of flat CMYK is larger than 310%	[183]

List of Errors and Cautions in the Profile PDF/X-1a PLUS Newspapers v2

Cautions

Changed image resolution	[213]
Document encoding changed to binary	[158]
Font "X" is a TrueType font	[195]
Font "X" is a Type 3 font	[196]
Image is rotated	[208]
Indexed color is used	[182]
Invisible object removed	[207]
Not all pages in the document have the same size	[169]
Removed embedded PostScript fragment	[222]
Spot color – converted color	[188]
Spot color "X" and spot color "Y" have the same CMYK values	[187]
Text point size <n> is less than 9.0	[201]
Text point size <n>, colored with 6 or more color plates, is less than 6.00 points	[202]
X and Y scaling of image differ 3 %	[209]

Errors

Alternative color space is not CMYK or Gray	[184]
Annotation lies inside printable area	[225]
Annotation setting changed to non-printing	[218]
Black text is set to overprint	[204]
Changed line width	[206]
Changed Page Box Layout to match the Press Layout specifications	[164]
Changed Title, Producer or Creator to Unknown	[160]
Changed trapped flag to false	[159]
Creation and/or Modification date info added	[161]
Custom black generation function removed	[193]
Custom halftone function removed	[191]
Custom transfer function removed	[189]
Custom undercolor removal function removed	[193]
Document contains actions	[220]
Document contains ambiguously defined spot colors	[184]
Document has security	[162]
Document needs repair on open	[158]

Document Producer info string contains Acrobat PDFWriter	[161]
Effective resolution of color or grayscale images is less than 100 dpi, or, Effective resolution of single-bit black & white images is less than 600 dpi	[211]
Font "X" has been embedded	[200]
Font "X" is a MultipleMaster font	[196]
Font "X" uses an artificial bold, italic or outline style	[199]
Found objects with transparency settings	[194]
Halftone phases removed	[190]
Image compression changed	[215]
Image contains alternates that are default for printing	[210]
Invisible object removed	[205]
Number of nodes <n> in the single path is more than 500	[206]
Number of pages more than 1	[170]
Page <n> is empty	[170]
Process color – converted color	[173]
Removed annotation	[217]
Removed OPI	[216]
Renamed spot color	[188]
Rendering intent removed	[189]
Text does not knock out	[205]

List of Errors and Cautions in the Profile PDF/X-1a PLUS Commercial CMYK v1

Cautions

Changed Output Intent	[227]
Custom black generation function removed	[193]
Custom undercolor removal function removed	[193]
Document encoding changed to binary	[158]
Font is a City font	[198]
Font "X" is a TrueType font	[195]
Font "X" is a Type 3 font	[196]
Indexed color is used	[182]
Not all pages have the same orientation	[169]
Not all pages in the document have the same size	[169]
Number of nodes <n> in the single path is more than 1000	[206]
Number of pages more than 1	[170]
Page <n> is empty	[170]
PDF/X version key set to PDF/X-1a:2001	[225]
Process color – converted color	[173]

Removed annotation	[217]
Removed form fields, thumbnails, bookmarks, article threads or unused destinations	[219]
Removed Object	[171]
Renamed spot color	[188]
Text point size <n> is less than 5.00	[201]
Text point size <n>, colored with 2 or more color plates, is less than 8.00 points	[202]
Total ink coverage of flat CMYK is larger than <n> %	[183]
Trapnet annotation does not conform to PDF/X-1a requirements	[223]

Errors

Alternative color space is not CMYK or Gray	[184]
Annotation lies inside printable area	[225]
Annotation setting changed to non-printing	[218]
Calibrated RGB is used	[175]
Changed image resolution	[213]
Changed line width	[206]
Changed Title, Producer or Creator to Unknown	[160]
Changed trapped flag to false	[159]
Creation and/or Modification date info added	[161]

Custom transfer function removed	[189]
Document contains actions	[220]
Document has security	[162]
Document needs repair on open	[158]
Document Producer info string contains – Acrobat PDFWriter	[161]
Document uses <n> color separations instead of o	[185]
Effective resolution of color or grayscale images is less than <n> dpi, or, Effective resolution of single-bit black & white images is less than 600 dpi	[211]
Font "X" has been embedded	[200]
Font is a double-byte font	[197]
Font "X" is a MultipleMaster font	[196]
Font "X" uses an artificial bold, italic or outline style	[199]
Found objects with transparency settings	[194]
Halftone phase is used	[190]
ICC-based color is used	[182]
Image compression changed	[215]
Image contains alternates that are default for printing	[210]
Lab is used	[178]
Page Box Layout does not match the Press Layout specifications	[164]

PDF version is not equal to 1.3	[155]
Removed OPI	[216]
Rendering intent removed	[189]
RGB color is used	[174]
Text does not knock out	[205]
White text has been set to knock-out	[205]

List of Errors and Cautions by Category

Errors and Cautions of the Category “Document Format” [155]

- PDF version is not equal to 1.3..... [155]
- Document encoding changed to binary [158]
- Document needs repair on open [158]
- Changed trapped flag to false [159]

Errors and Cautions of the Category “Document Info” [160]

- Changed Title, Producer or Creator to Unknown [160]
- Creation and/or Modification date info added [161]
- Document Producer info string contains: Acrobat PDFWriter [161]

Errors and Cautions of the Category “Security” [162]

- Document has security [162]

Errors and Cautions of the Category “Page Box Layout” [164]

Changed Page Box Layout to match the Press Layout specifications[164]

Errors and Cautions of the Category “Page Size” [169]

Not all pages in the document have the same size [169]

Not all pages have the same orientation [169]

Errors and Cautions of the Category “Page Info” [170]

Page <n> is empty..... [170]

Number of pages more than 1 [170]

Removed object [171]

Errors and Cautions of the Category "Process Color"[173]

Process color: converted color	[173]
RGB color is used	[174]
Calibrated RGB is used	[175]
Lab is used	[178]
ICC-based color is used	[182]
Indexed color is used	[182]
Total ink coverage of flat CMYK is larger than <n>%	[183]

Errors and Cautions of the Category "Spot Color" [184]

Alternative color space is not CMYK or Gray	[184]
Document contains ambiguously defined spot colors	[184]
Document uses <n> color separations instead of o	[185]
Spot color "X" and spot color "Y" have the same CMYK values.....	[187]
Spot color: converted color	[188]
Renamed spot color	[188]

Errors and Cautions of the Category “Rendering Parameters” [189]

- Custom transfer function removed..... [189]
- Rendering intent removed [189]
- Halftone phases removed [190]
- Halftone phase is used [190]
- Custom halftone function removed..... [191]
- Custom halftone function is used [192]
- Custom undercolor removal function removed..... [193]
- Custom black generation function removed [193]

Errors and Cautions of the Category “Transparency” [194]

- Found objects with transparency settings [194]

Errors and Cautions of the Category "Font Type" [195]

Font "X" is a TrueType font [195]

Font "X" is a Type 3 font..... [196]

Font "X" is a Multiple Master font [196]

Font is a double-byte font [197]

Font is a City font [198]

Errors and Cautions of the Category "Font Style" [199]

Font "X" uses an artificial bold, italic or outline style [199]

Errors and Cautions of the Category "Font Embedding" [200]

Font "X" has been embedded..... [200]

Errors and Cautions of the Category "Text" [201]

Text point size <n> is less than <n>[201]

Text point size <n>, colored with <n> or more color plates, is less than <n> points[202]

Black text is set to overprint..... [204]

Text does not knock out or white text has been set to knock-out [205]

Invisible object removed [205]

Errors and Cautions of the Category "Line Art" [206]

Changed line width [206]

Number of nodes <n> in the single path is more than <n> [206]

Invisible object removed[207]

Errors and Cautions of the Category "Image Position" [208]

Image is rotated [208]

X and Y scaling of image differ 3 % [209]

Errors and Cautions of the Category “Image Resolution” [210]

- Image contains alternates that are default for printing [210]
- Removed alternate images [211]
- Effective resolution of images is less or larger than <n> dpi [211]
- Changed image resolution [213]

Errors and Cautions of the Category “Image Compression” [215]

- Image compression changed [215]

Errors and Cautions of the Category “OPI” [216]

- Removed OPI [216]

Errors and Cautions of the Category “Annotations” [217]

- Removed annotation [217]
- Annotation setting changed to non-printing [218]

Errors and Cautions of the Category “Metadata” [219]

Removed form fields, thumbnails, bookmarks, article threads or unused destinations....	[219]
Document contains actions	[220]
Removed actions	[221]

Errors and Cautions of the Category “PDF/X” [222]

Removed embedded PostScript fragment	[222]
Page description contains inline PS code	[222]
Trapnet annotation does not conform to PDF/X-1a requirements	[223]
PDF/X version key set to PDF/X-1a:2001	[225]
Annotation lies inside printable area	[225]
Moved objects outside of printable area.....	[226]

Errors and Cautions of the Category “PDF/X Color” [227]

Changed Output Intent.....	[227]
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Alphabetical List of Errors and Cautions

Alternative color space is not CMYK or Gray	[184]
Annotation lies inside printable area	[225]
Annotation setting changed to non-printing.....	[218]
Black text is set to overprint	[204]
Calibrated RGB is used	[175]
Changed image resolution	[213]
Changed line width	[206]
Changed Output Intent	[227]
Changed Page Box Layout to match the Press Layout specifications	[164]
Changed Title, Producer or Creator to Unknown	[160]
Changed trapped flag to false	[159]
Creation and/or Modification date info added.....	[161]
Custom black generation function removed	[193]
Custom halftone function is used	[192]
Custom halftone function removed.....	[191]
Custom transfer function removed.....	[189]
Custom undercolor removal function removed.....	[193]

Document contains actions	[220]
Document contains ambiguously defined spot colors	[184]
Document encoding changed to binary	[158]
Document has security	[162]
Document needs repair on open	[158]
Document Producer info string contains: Acrobat PDFWriter	[161]
Document uses <n> color separations instead of o.....	[185]
Effective resolution of images is less or larger than <n> dpi.....	[211]
Font "X" has been embedded	[200]
Font is a City font	[198]
Font is a double-byte font.....	[197]
Font "X" is a Multiple Master font	[196]
Font "X" is a TrueType font.....	[195]
Font "X" is a Type 3 font	[196]
Font "X" uses an artificial bold, italic or outline style	[199]
Found objects with transparency settings.....	[194]
Halftone phase is used	[190]
Halftone phases removed	[190]
ICC-based color is used	[182]

Image compression changed	[215]
Image contains alternates that are default for printing.....	[210]
Image is rotated	[208]
Indexed color is used	[182]
Invisible object removed	[205]
Invisible object removed	[207]
Lab is used	[178]
Moved objects outside of printable area.....	[226]
Not all pages have the same orientation	[169]
Not all pages in the document have the same size	[169]
Number of nodes <n> in the single path is more than <n>	[206]
Number of pages more than 1	[170]
Page <n> is empty.....	[170]
Page description contains inline PS code	[222]
PDF version is not equal to 1.3	[155]
PDF/X version key set to PDF/X-1a:2001	[225]
Process color: converted color	[173]
Removed actions.....	[221]
Removed alternate images.....	[211]

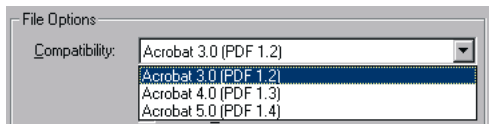
Removed annotation.....	[217]
Removed embedded PostScript fragment	[222]
Removed form fields, thumbnails, bookmarks, article threads or unused destinations.....	[219]
Removed object	[171]
Removed OPI.....	[216]
Renamed spot color	[188]
Rendering intent removed	[189]
RGB color is used.....	[174]
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Text does not knock out or white text has been set to knock-out.....	[205]
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Trapnet annotation does not conform to PDF/X-1a requirements	[223]
X and Y scaling of image differ 3 %	[209]

Errors and Cautions of the Category “Document Format”

PDF version is not equal to 1.3

Cause

The version numbers of the PDF files are different from those of Adobe Acrobat, as you can see in the illustration below.



If the PDF file version is lower than 1.3, it means that the PDF file is:

- created with Acrobat Distiller 3.x
- created with Acrobat Distiller 4.x or 5.x, but with the Job Information settings ensuring the compatibility with the 1.2 version.

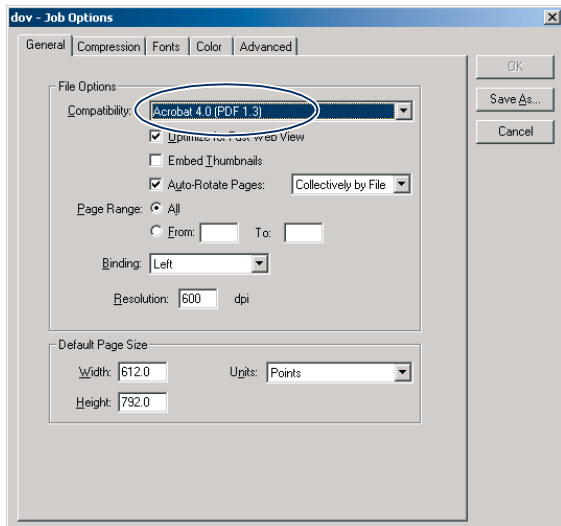
The following table gives you an overview of the main differences between Acrobat 3.x (PDF 1.2) on one hand and Acrobat 4.x (PDF 1.3) and Acrobat 5.x (1.4) on the other.

Acrobat 3.0 (PDF 1.2)	Acrobat 4.0 (PDF 1.3) and 5.0 (PDF 1.4)
PDF file can be opened by Acrobat viewers 3.0 and later.	PDF file can be opened by Acrobat viewers 3.0 and later. However, some or all of the documents may be unviewable if opened with versions earlier than the version used to create the file.

Acrobat 3.0 (PDF 1.2)	Acrobat 4.0 (PDF 1.3) and 5.0 (PDF 1.4)
Patterns display as 50% gray, but print correctly.	Patterns display and print correctly.
Users can preserve, remove or apply Transfer functions.	Users can preserve or remove Transfer functions in 4.0 but not apply them. Users can preserve, remove or apply Transfer functions in 5.0.
All colors are converted to CalRGB.	All colors are converted to sRGB.
ICC profile color management is not supported.	ICC profile color management is supported.
DeviceN color space is converted to alternate color space.	DeviceN color space is supported.
Smooth shaded objects are converted to images.	Smooth shading is supported.

See also Adobe Acrobat online Help.

Solution



Create a new PDF document and make sure that the PDF version is 1.3. You can do this in the following ways:

- Use Acrobat Distiller 4.x to convert your PostScript file into a PDF document.
- Use Acrobat Distiller 5.x to create a PDF document but make sure that the option Compatibility in the General Job Options is set to Acrobat 4.0 (PDF 1.3), as shown in the example.
- If the PDF version of your PDF document is earlier than 1.3, open your PDF document in Adobe Acrobat 4.0 and save it again.

Document encoding changed to binary

Cause

The PDF file contains ASCII-encoded elements. ASCII encoding was formerly required to ensure that PDF files could be safely transported via e-mail or the Internet. However, most e-mail software in use today deals with non-ASCII documents normally, which eliminates the need to ASCII-encode your document. The increase in file size when you use ASCII encoding is substantial.

Solution

All ASCII encoding will be removed and the PDF document will be converted automatically to a binary format, which can significantly reduce the file size. Note that the size of some files could increase slightly.

Document needs repair on open

Cause

There are several ways in which a PDF document can be damaged, and this check enables you to find out whether the document has incurred such damage. Possible sources of PDF damage are incomplete downloading from the Internet, mailing a binary-encoded PDF with an ASCII mail system, etc. Adobe Acrobat automatically detects such

damage, and attempts to repair it when the PDF document is opened. In this repair process, the document's index file is regenerated. However, these repairs may not suffice if you plan to use the file in your online workflow, although the damage may go unnoticed in documents that are used in print environments only.

Solution

Redistill your PDF document or save it in Adobe Acrobat. Choose File > Save as and save your file with the same name.

Changed trapped flag to false

Cause

The trap flag for the PDF document was set to trapped or unknown.

Solution

The trap flag has been set to false, i.e. "not trapped".

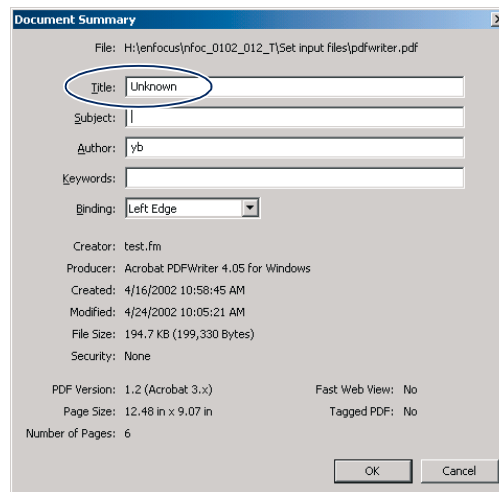
Errors and Cautions of the Category “Document Info”

Changed Title, Producer or Creator to Unknown

Meaning

When viewing a PDF document, you can view some basic information on the file, such as the title, the author, the subject of the document, etc. In Acrobat 5, for example, you can do so by choosing File > Document Properties > Summary. Some of this information is set by the person who created the PDF document, some by Acrobat. The Creator field, e.g., shows the authoring application in which the original document was created (e.g., Adobe FrameMaker, Microsoft Word, etc.).

In some cases, however, the Title, Producer or Creator text field can be empty. If so, the PDF/X-1a profile will fill in the word “Unknown” in the corresponding text field.



Creation and/or Modification date info added

Meaning

When viewing a PDF document, you can view some basic information on the file, such as the creation date, modification date, file size etc. In Acrobat 5, for example, you can do so by choosing File > Document Properties > Summary. Some of this information, such as the creation date and modification date, is normally filled in automatically at the time when the PDF document is created. Sometimes, however, it is not. If the creation date or the modification date is missing, the PDF/X-1a profile will fill in the current date instead.

Document Producer info string contains: Acrobat PDFWriter

Cause

The PDF file has been created with the Acrobat PDFWriter printer driver.

Solution

Use Acrobat PDFWriter only if you want to convert small text documents without graphics into a PDF format. For files with a lot of graphics, colors and different fonts, use the Acrobat Distiller printer driver.

Errors and Cautions of the Category “Security”

Document has security

Cause

You can provide the PDF documents with security. You can use a password to restrict the access to certain features such as:

- Printing the PDF documents
- Changing the PDF document
- Selecting text and graphics
- Adding notes to the PDF document

Solution

Save your PDF document without any security.

In Acrobat 5, proceed as follows:

- 1 Open the PDF document.
- 2 Choose File > Document Security.
- 3 Choose Acrobat Standard Security and click Change Settings.

- 4 Type the password and click OK.
- 5 Click to clear the selected security settings and click OK.
- 6 Click Close.
- 7 Save and close your PDF document.

In Acrobat 4, proceed as follows:

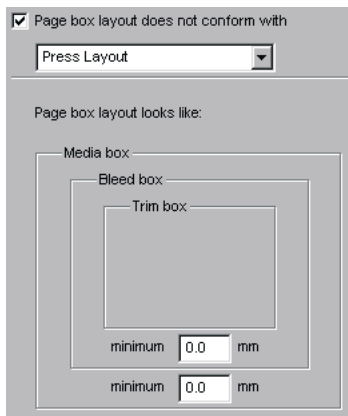
- 1 Open the PDF document.
- 2 Choose File > Save as.
- 3 Click Settings in the Security window.
- 4 Type the password, click to clear all the security settings and click OK.
- 5 Click Save.

Errors and Cautions of the Category “Page Box Layout”

Changed Page Box Layout to match the Press Layout specifications

Cause

When you design a document and create a PDF document, it will contain a number of page boxes. Page boxes are imaginary rectangles drawn around the various objects in the page and around the page itself. You cannot see these page boxes if you look at a PDF document in Adobe Acrobat without one of the supported PDF/X editing tools. They are a sort of description “behind the scenes” of the layout of your PDF document. See also [“Types of page boxes”](#) on page 167.




There are instances in the PDF document where the page box layout does not conform with the press layout. The press layout was set in the PDF/X-1a profiles as follows:

- 5 mm between the media box and the bleed box
- 5 mm between the bleed box and the trim box

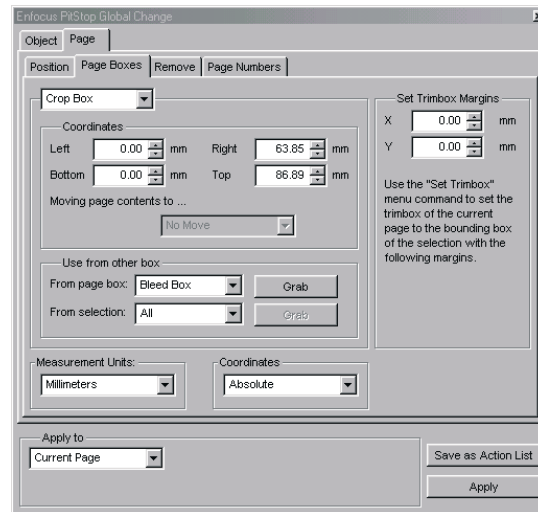
If you do not follow this rule, you receive a warning in the report. Examples of this sort of variations are:

- The bleed box and the trim box are not set in the source document, which seems to make them coincide with the media box. In this case, you can have problems with the printing because the trim box is too big or not present.
- A trim box was set but it is a box of 3 mm, which is less than the 5 mm required from the profile. In this case, a variation from the profile is recommended so that the file can be printed correctly.

Solution

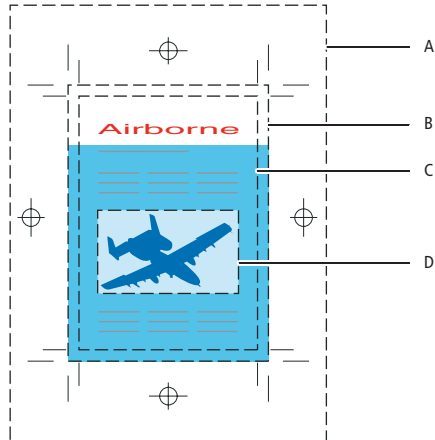
Because the PDF documents come from different programs, there are different possibilities that do not necessarily cause problems. If this warning appears in the report, a visual check is the only solution. In Adobe Acrobat, you can see the different boxes thanks to this button  (View page boxes) of Enfocus PitStop Professional. If you want to see or to change the coordinates of the different page boxes, use Enfocus PitStop Professional or one of the other supported tools, and proceed as follows:

- 1 Choose Window > Show PitStop Global Change.
- 2 Click the Page tab > Page boxes.
- 3 Change the coordinates of the page box.
- 4 Click Apply.



Types of page boxes

The illustration below shows the various types of page boxes.



A. Media box The media box is the largest page box. The media box corresponds to the page size (e.g. A4, A5, US Letter etc.) that you selected when you printed your document to a PostScript or PDF file. In other words, the media box determines the physical size of the media on which the PDF document is displayed or printed.

B. Bleed box If you use bleed in your document, the PDF document will also have a bleed box. Bleed is the amount of color (or any other artwork) that extends beyond the edge of a page. You can use bleed to make sure that, when the document is printed, the ink will be printed to the edge of the page.

C. Trim box The trim box indicates the final size of a document after printing and trimming.

D. Art box The art box is the box drawn around the actual contents of the pages in your documents. This page box is used when importing PDF documents in other applications.

Crop box The crop box is the "page" size at which your PDF document is displayed in Adobe Acrobat. In normal view, only the contents of the crop box are displayed in Adobe Acrobat.

Use of page boxes

Page boxes are particularly useful to resize objects or pages in your PDF document. There are a number of software solutions that offer you the tools to do this by means of global changes or PDF Profiles. Thus, you can easily resize your document from A4 size to US Letter or to a custom page size, for example, without having to make –often cumbersome and time-consuming– modifications in your source document.

Pages boxes: example

Suppose you create a cover for a magazine in the following steps:

- 1** You decide that the size of the cover after printing and trimming will be A5 (148 x 210 mm). This will be the size of the trim box.
- 2** You are also using a background color which extends to the left, right and bottom edge of the page. To this end, you use 5 mm of bleed on either side. Consequently, the size of the bleed box will be 158 x 220 mm.
- 3** You place this artwork on a blank page in a desktop publishing program. The size of the blank page is 180 x 260 mm. This will become the crop box in Adobe Acrobat.
- 4** Finally, you print this file to a PostScript file (and create a PDF document of it later). When selecting a printer driver, you specify that the page size has to be A4 (210 x 297 mm), because printer and registration marks have to fit on the page. This will be the size of the media box.

Errors and Cautions of the Category “Page Size”

Not all pages in the document have the same size

Cause

The PDF file contains pages of different sizes.

Solution

Create a separate page file per page size. Now you can extract the pages with a different size and save them separately. To extract a page, use the Acrobat Document command > Extract Pages and choose Delete Pages After Extracting.

Not all pages have the same orientation

Meaning

A single PDF document can contain both portrait and landscape pages. If so, a caution may appear in the preflight report. Check your PDF document to make sure that pages have not been rotated inadvertently.

Errors and Cautions of the Category “Page Info”

Page <n> is empty

Cause

The document contains an empty page. This was maybe done intentionally, e.g. if a chapter ends on an empty even page.

Solution

Delete the empty page in Adobe Acrobat (click Document and Delete Pages) and check if the page numbers are still consistent. If this is not so, delete the empty page(s) in the source document and create the PDF file again.

Number of pages more than 1

Cause

This error may appear in the profile PDF/X-1a PLUS Newspapers v2 because, obviously the PDF document may only consist of 1 page.

Solution

Check your original document and make sure it only consists of 1 page.

Removed object

Meaning

The PDF document contained one or more graphic elements that lay completely outside the media box. The media box corresponds to the page size (e.g. A4, A5, US Letter etc.) that you selected when you printed your document to a PostScript or PDF file. In other words, the media box determines the physical size of the media on which the PDF document is displayed or printed.

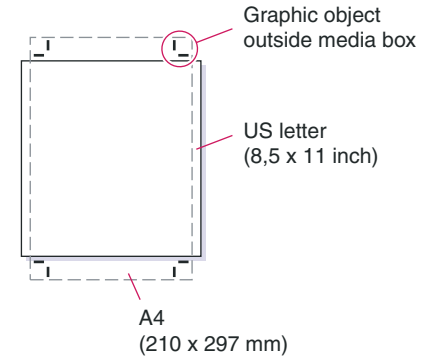
See also ["Types of page boxes"](#) on page 167.

Cause

A possible cause is that the size of the media box of the PDF document was changed later, using PDF editing software. For example, suppose you had an A4-size PDF document with printer registration marks and the media box of this PDF document was changed to US letter later. The contents of the PDF document, however, was not scaled or moved correspondingly. In that case, the top and bottom trim or registration marks may lie outside the media box.

Solution

Objects outside the media box will be removed automatically by the PDF/X profile.



Errors and Cautions of the Category “Process Color”

Process color: converted color

Meaning

The PDF/X has detected text or line art which had inappropriate color definitions. If so, these colors will automatically be converted, as listed in the table below.

Color definition	Converted to
RGB	CMYK
Calibrated Gray	CMYK
Calibrated RGB	CMYK
Lab	CMYK
ICC based colors	CMYK
RGB gray	Gray space gray
CMYK gray	Gray space gray
RGB black	Gray space black

Color definition	Converted to
CMYK black	Gray space black

For more information about color management and color models, see the respective chapter in your PDF/X software solution User Guide.

RGB color is used

Cause

Some of the object in the PDF document contain RGB colors. An object can be a text, line art or a pixel image. RGB colors have to be converted according to the appropriate color model.

Solution

You can proceed as follows:

- Convert the text or line art in the appropriate color model. You can do this in Adobe Acrobat via Enfocus PitStop Professional, with for example the Enfocus PitStop Inspector, a global change or an Action List; or with one of the many other software solutions mentioned in this guide.
- Convert the pixel file according to the appropriate color model. To do this, activate Adobe Photoshop, select Image and click Mode and CMYK Color. Import the file again in the design program (or update the link to that file) and create the PDF file again.

Calibrated RGB is used

Cause

This check enables you to identify all the occurrences of calibrated gray or calibrated RGB.

The reproduction of a color or a grayscale slightly differs from an input device (e.g., a scanner or a digital camera) to an output device (e.g., a computer screen). That is why the colors on screen can be different from the colors produced when you print the PDF on an output device. To prevent this, calibrated colors contain information on how each device (e.g., a color screen) compensates its standard settings in order to faithfully reproduce colors. For example, the calibrated color mentions that screen X has to add 5% of red to obtain the intended color. Note: calibrated colors are only useful when they apply to a totally calibrated workflow. In this case, the input and output devices of the workflow as well as the display screen of the document are calibrated.

Solution

Check your source files and look for occurrences of calibrated gray or calibrated RGB color definitions. Replace the calibrated gray or the calibrated RGB by a CMYK color or a spot color.

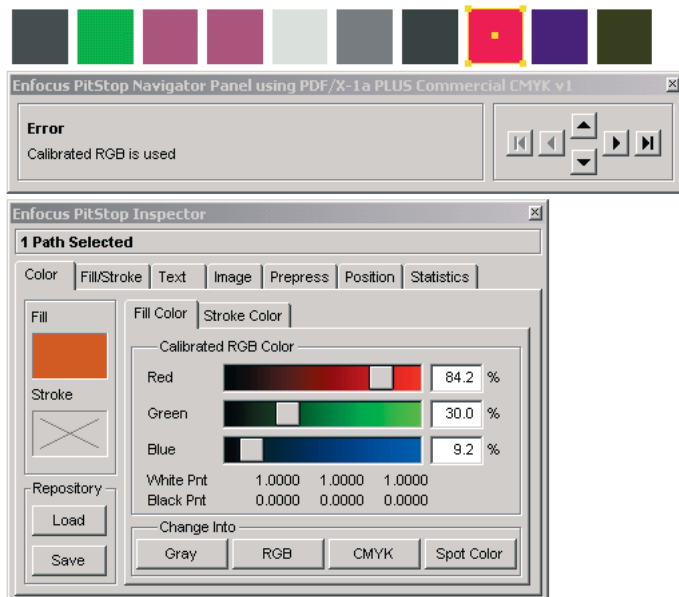
If you have one of the many PDF/X solutions introduced in this guide, it is easier to correct this error directly in the PDF document.

Proceed as follows:

- 1 Click the cross sign (X) in the report.

The Enfocus PitStop Navigator Panel appears and the first object in calibrated gray or in calibrated RGB is visible.

Errors and warnings		
Severity	Description	
X Error	RGB color is used (15x)	
X Error	Calibrated Gray is used	
X Error	Calibrated RGB is used (2x)	
X Error	LAB is used	



2 Choose Window > Show PitStop Inspector and check the calibrated gray or calibrated RGB values.

3 Choose Window > Show PitStop Global Change.

4 In the Object > Color tab, in the From area, click Grab fill.

Tip: Also check the color management settings in Enfocus PitStop Professional or one of the other solutions. For more information, read the following chapters in the User Guide:

- "Setting Your Enfocus PitStop Professional Preferences"

and

- "Chapter 11: Color Management"

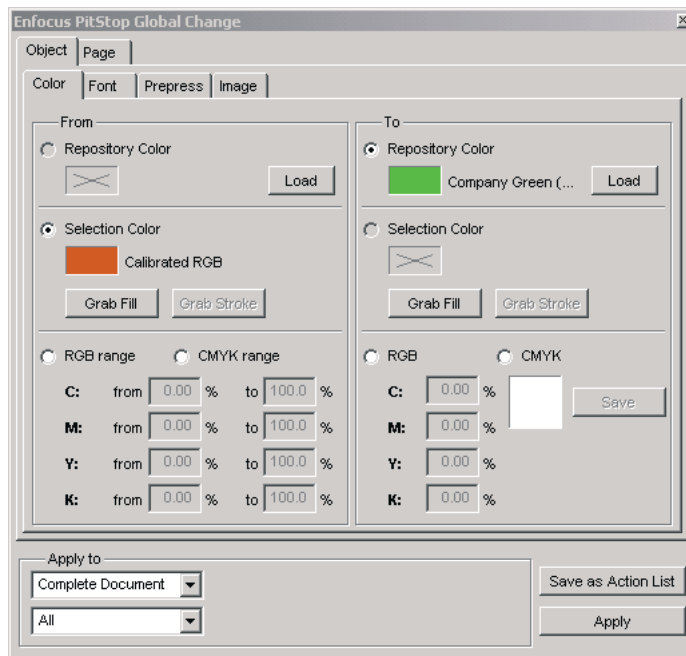
5 In the “To” area, select the color you want to change the calibrated gray or the calibrated RGB to. This can be done in different ways:

- Click Load and load a color from the repository.
- In the PDF document, click an object with the right color and then click Grab Fill in the Global Change panel.
- Specify the CMYK values and click Save to reuse this color later on.

6 Click Apply.

7 Do one of the following:

- Select Apply to > Complete Document and click Apply to carry on this change in the complete PDF document.
- Click Save as Action List if you still have other PDF containing this specific calibrated color.



Lab is used

Cause

This check enables you to identify all the occurrences of LAB colors.

The LAB color space (CIE) is a device-independent color space. It is used as a reference point by the color management systems. If LAB colors are used as a reference, the color management system can compare the color gamuts from the devices. The LAB color space is broad enough to contain all the colors viewable to the human eye.

For more information on the color gamuts and the color spaces, read the Enfocus PitStop Professional User Guide, or consult one of the many other industry-wide resources available.

Solution

Check your source files and look for LAB colors. Replace them by a CMYK color or a spot color.

If you have Enfocus PitStop Professional, or one of the other software solutions, it is easier to correct this error directly in the PDF document.

Proceed as follows:

<i>Errors and warnings</i>		
Severity	Description	
X Error	RGB color is used (15x)	
X Error	Calibrated Gray is used	
X Error	Calibrated RGB is used (2x)	
X Error	LAB is used	

- 1 Click the cross sign (X) in the report.

The Enfocus PitStop Navigator Panel appears and the first object in a LAB color is visible.

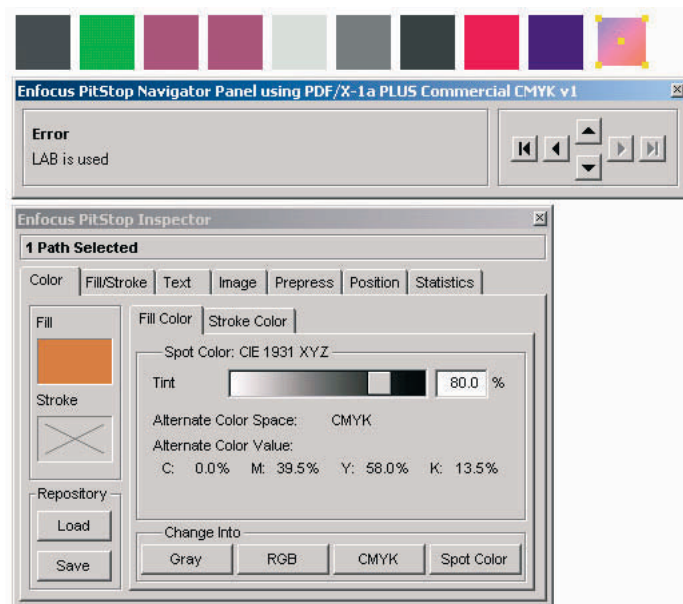
- 2 Choose Window > Show PitStop Inspector and check the LAB color values.
- 3 Choose Window > Show PitStop Global Change.
- 4 In the Object tab > Color, in the "From" area, click Grab Fill.

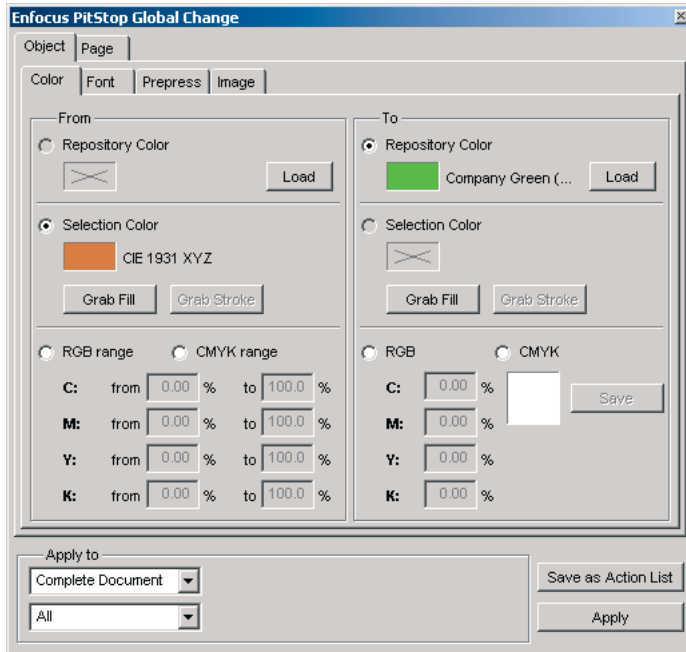
Tip: Also check the color management settings in Enfocus PitStop Professional. For more information, read the following chapters in the User Guide:

- "Setting Your Enfocus PitStop Professional Preferences"

and

- "Chapter 11: Color Management"





5 In the “To” area, select the color you want to change the LAB color to. This is possible in different ways:

- Click Load and load a color from the repository.
- In the PDF document, click an object that has the right color and then click Grab Fill in the Global Change panel.
- Specify the CMYK colors and click Save in order to reuse this color later on.

6 Click Apply.

7 Do one of the following:

- Select Apply to > Complete Document and click Apply to carry on this change in the entire PDF document.
- Click Save as Action List if you still have other PDF documents containing this specific LAB color.

ICC-based color is used

This check detects all occurrences of ICC profile based colors. Every input and output device reproduces color and grayscales in a slightly different way. As a result, the colors you see in a PDF file on your screen may not match the colors produced when you print the PDF to an output device. Several options are available to avoid this problem of device dependency, one of which is using ICC color profiles.

An ICC color profile is a mathematical description of the color space used by a specific device. In other words, the ICC color profile describes how the colors produced by the device relate to the reference CIE LAB color space (a device-independent color space).

Indexed color is used

Cause

The indexed color space uses no more than 256 colors, and is as such particularly suited for use in Web applications. Images are typically converted to indexed color mode in order to decrease their file sizes. When an image is converted to indexed color, a color lookup table is created, in which the colors that were used in the image are stored and indexed. Using an indexed color table lets you reduce the file size of an image while maintaining the visual quality that you need.

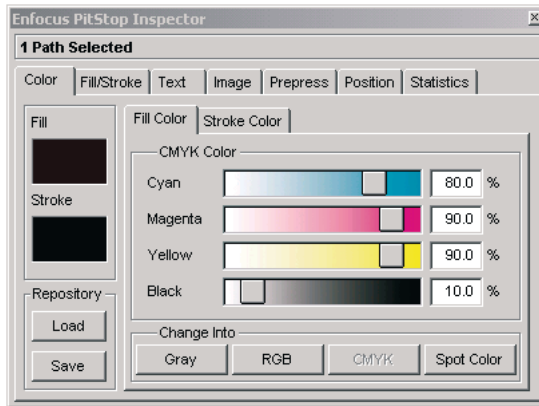
Solution

Avoid using indexed colors in your source documents. Use CMYK colors instead.

Total ink coverage of flat CMYK is larger than <n>%

Cause

The combination of the four components of the CMYK color you used gives an ink coverage higher than a given maximum allowed percentage, e.g. 310 %.



Solution

Reduce the total ink coverage of the four CMYK inks to less than the percentage mentioned in the preflight report. You can do this in your design program or use one of the Acrobat plug-in solutions.

Errors and Cautions of the Category “Spot Color”

Alternative color space is not CMYK or Gray

Cause

This check allows you to check the PDF document for the presence of spot colors with an alternative color space definition other than CMYK or Gray.

Solution

The alternative color space for the offending spot color is automatically converted to CMYK.

Document contains ambiguously defined spot colors

Cause

When two spot colors with the same name and different CMYK values are found in the document, they are considered ambiguously defined spot colors.

For example, when you have integrated a graphic in a spot color from a drawing program in a DTP program in which you also used this spot color but with different CMYK values.

With this check, you can find out whether any ambiguous spot color definitions are present in the PDF document. The risk of these ambiguous definitions lies in the fact that these spot colors will appear as differing colors on screen or when printed with process colors, but they will print as one and the same color when printed with spot color inks.

Solution

Check your source files and make sure the spot color values are the same everywhere, also in imported line graphics.

If you have Enfocus PitStop Professional, it is easier to correct this error and to manage your spot colors with the color repository.

For more information, see the chapter on “Working with a Color Repository” in the User Guide of Enfocus PitStop Professional.

Document uses <n> color separations instead of 0

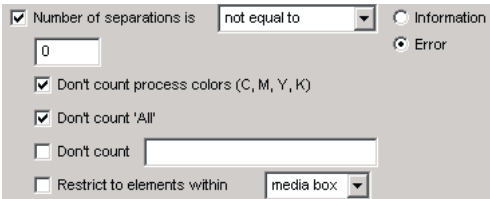
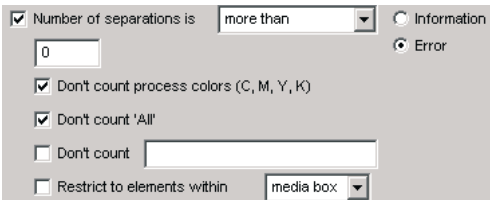
Cause

In offset printing, each CMYK color (cyan, magenta, yellow, black) is reproduced using a single printing plate. The document colors must be separated when used for offset printing. One color is used for each plate. Then each plate is printed making sure the registration marks match exactly. This way, the four inks combine to produce the original drawing.

The PDF Profile checks the number of separations in the PDF document by comparing them with the number you chose. This does not take into account:

- The basic selection of the process colors cyan, magenta, yellow and black.
- The spot color "All" used for the registration marks. The spot color "All" is the "registration color".

The settings depend on your verification of the PDF document: you can check its ability to print in CMYK or in spot colors. The following table gives you an overview of the settings and their meanings.

Profile for...	Setting	Meaning
CMYK		The number of separations – except CMYK – must be equal to 0. If this is not the case, an error will occur in the report, saying there are more colors than cyan, magenta, yellow and black.
Spot color		One or more spot colors will be used. In other terms, there must be more separations than 0. If this is the case, a "warning" will inform you in the report.

Solution

Check the source document and look for CMYK colors and spot colors.

If you have Enfocus PitStop Professional, you can apply a global change. If you have to perform this color change in several PDF documents, you can save this global color change as an action list.

For more information, see the Enfocus PitStop Professional User Guide.

Spot color “X” and spot color “Y” have the same CMYK values

Cause

If two spot colors with the same CMYK values but different names are found in the document, they are considered ambiguously defined spot colors.

With this check, you can find out whether any ambiguous spot color definitions are present in the PDF document. The danger of these ambiguous definitions lies in the fact that these spot colors will appear as differing colors on screen or when printed with process colors, but they will print as one and the same color when printed with spot color inks.

Solution

Check your source files and the CMYK values of the spot colors, also in imported line graphics. Delete the superfluous spot colors.

If you have Enfocus PitStop Professional, it is easier to correct this error and to manage your spot colors with the color repository. For more information, see the chapter “Working with the Color Repository” in the User Guide of Enfocus PitStop Professional.

Spot color: converted color

Meaning

Spot colors were used in your PDF document and they have been converted to CMYK colors.

Spot colors are printed with special premixed inks, used instead of, or in addition to, CMYK inks (process colors). Spot color printing requires a separate plate for every spot color, whereas process color printing only uses four plates, one for each of the four basic CMYK colors. Spot colors are especially well suited for offset printing, but should be used with caution when creating documents for digital output or monitor display. Note that spot colors are also more expensive to print.

Renamed spot color

Cause

The PDF document contains two spot colors with names that differ only in their suffixes, e.g. Rubine Red CV and Rubine Red CVU. This kind of conflict should be avoided.

Solution

All the suffixes in conflict by CV, CVU or CVC are automatically replaced by CV.

Errors and Cautions of the Category “Rendering Parameters”

Custom transfer function removed

Meaning

Custom-designed transfer curves are used for objects in the PDF document. A transfer curve is used to change the colors in a document in a uniform way. For example, you can define transfer curves that invert all the colors for line art in the document, increase the saturation for all colors in the document, etc.

Custom transfer curves are removed automatically by the PDF/X profile.

Rendering intent removed

Meaning

A rendering intent is a translation method used to convert colors between different devices. Each output device has a different color range that it can reproduce. In order to conserve the appearance of an image across devices, the colors that cannot be reproduced by a specific output device (i.e. your color printer) need to be remapped to the nearest matching color that does lie within the output device's color range.

This remapping is performed according to a specific method called a rendering intent. In addition, rendering intents can also be defined to deal with different types of graphics, to achieve the best possible results for a particular type of image, on a particular output device.

Rendering intents were used in the PDF document and were automatically removed by the PDF/X-1a profile.

Halftone phases removed

Meaning

Halftone phases were used in the PDF document and have automatically been removed by the PDF/X-1a profile.

A halftone phase is a shift in the alignment of halftone and pattern cells in device space, to compensate for window system operations that involve scrolling. Halftone phases are no longer used, but may still be found in documents containing artwork from older source applications (e.g. CorelDraw 7).

Halftone phase is used

Cause

A halftone phase is a shift in the alignment of halftone and pattern cells in device space, to compensate for window system operations that involve scrolling. It is no longer used, but may still be found in documents containing artwork from older source applications (e.g. CorelDraw 7).

Solution

Remove artwork containing halftone phase information from the source documents.

Custom halftone function removed

Meaning

Custom-designed halftone transfer curves were used in the PDF document and have automatically been removed by the PDF/X-1a profile.

A halftone transfer curve is used to compensate for the dot gain or dot loss that occurs when an image is transferred to film. Also, halftone transfer curves are used when transferring the document to film in order to make up for the dot gain or loss associated with a specific printing device. Dot gain is the phenomenon that occurs when a dot (the smallest printed unit) is transferred to film, or printed on paper. The size of the dot may increase or decrease (dot loss) slightly as a result of either of these processes.

Custom halftone function is used

Cause

A halftone transfer curve is used to compensate for the dot gain or dot loss that occurs when an image is transferred to film. Also, halftone transfer curves are used when transferring the document to film in order to make up for the dot gain or loss associated with a specific printing device. Dot gain is the phenomenon that occurs when a dot (the smallest printed unit) is transferred to film, or printed on paper. The size of the dot may increase or decrease (dot loss) slightly as a result of either of these processes.

Solution

Remove the custom halftone function from the source documents. To do this, make sure that the Print Setup in the source application does not include any custom halftone screening, but leaves this to the printer. For example, in QuarkXPress:

- 1 Click File > Print.
- 2 Click the Output tab in the Print dialog box.
- 3 Choose Printer from the Halftone list.

Custom undercolor removal function removed

Meaning

Custom undercolor removal definitions (UCR) have been included in the PDF document.

Undercolor removal is the process of removing large percentages of cyan (C), magenta (M), and yellow (Y) ink prior to printing, and replacing them with black (K) ink, in order to achieve a clearer black color in print, and to save on color inks.

Custom black generation function removed

Meaning

Black generation curves (BG) have been used for objects in the PDF document.

Black generation (BG) is the process of adding black ink to CMY-generated black and gray, in order to achieve a clear black color and to save valuable color ink.

Errors and Cautions of the Category “Transparency”

Found objects with transparency settings

Cause

The PDF document contains transparent objects. This can cause some problems if the document is visualized in Adobe Acrobat 4.0: transparent objects can indeed be rendered correctly in earlier versions. A transparent layer can also cause problems when you transpose the PostScript code of your PDF document to the halftone information of your printer (the “ripping”).

A typical example occurs when you save graphics with transparent elements as PDF compatible with Acrobat 5.0 in Adobe Illustrator 9.0 or Adobe InDesign 2.0. In Adobe Acrobat 4.0 transparent objects are made opaque in your documents. That is why the profile checks if your documents contain transparent objects.

Solution

You have to make the transparent objects opaque. This is possible in different ways:

- You can save the graphics in your source documents compatible with Adobe Acrobat 4.0.
- You can render the transparent objects manually opaque with the PitStop Inspector. Select the object and choose Show PitStop Inspector > Prepress > Transparency.
- You can render the transparent objects with an Action List. Choose Show PitStop Action List Panel and create an Action List to render the transparent objects opaque (Add > Changes > Remove Transparency).

Errors and Cautions of the Category “Font Type”

Font “X” is a TrueType font

Cause

The specified font is a TrueType font.

Solution

The TrueType fonts are widely used and are integrated in almost all desktop office software applications for the Windows and Mac operating systems. However, some professional prepress service providers are reluctant to support TrueType fonts, because they need to be converted to PostScript outlines in order to print well on PostScript devices, which may affect the quality of the resulting font.

Replace in your design program or word processor the TrueType fonts by their equivalent in the Adobe Type 1 format. Example: replace Arial (TrueType) by Helvetica (Adobe Type 1) or Times New Roman (TrueType) by Times (Adobe Type 1).

Font “X” is a Type 3 font

Cause

The specified font is an Adobe Type 3 font.

Solution

The Adobe Type 3 fonts are special mostly ornamental fonts with complex shapes and fills. They sometimes cause printing problems.

Select another font in your design program or word processor, such as Adobe Type 1, or convert the font to vector outlines and create the PDF file again. For more information on vector outlines, see the chapter on “Converting text to outlines” on page 105.

Font “X” is a Multiple Master font

Cause

The specified font is a Multiple Master font.

Solution

Multiple Master fonts are an extension of the Type 1 font format. Their particularity is that you can use e.g. Adobe Type Manager to create variants of a standard font (Master). You can recognize a Multiple Master font by the double “M” in its name; e.g.: TektoMM_308_wt_564_wd. Replace in your design program or word processor the Multiple Master fonts by fonts in the Adobe Type 1 format or convert the font in vectors and create the PDF file again.

Font is a double-byte font

Cause

The specific font is a composite font (also called a “double-byte” font). Composite fonts enable you to display Asian characters. They are also called “double-byte” fonts because every character is determined by 2 bytes (16 bits). Asian characters are not always supported in a later stage of the PDF workflow.

Solution

Convert the composite font to outlines in your design program or in your word processor, and create the PDF file again.

Font is a City font

Meaning

Fonts of the type "City" are used in the PDF document. City fonts are characterized by their name: these are city names like Geneva and Chicago. The City fonts are derived from bitmap fonts. On the Mac OS, they are sometimes used as substitution fonts when a specific font is not found on the system.

If a City font is found in the PDF document, it is mentioned in the report as a "Warning". It is not necessary a problem, but it is not recommended to use this kind of fonts.

Errors and Cautions of the Category “Font Style”

Font “X” uses an artificial bold, italic or outline style


Cause

Some fonts have only one standard size and one style: Roman. If you want to use another style, you will have to choose a similar font. Let's take the example of Futura: to put the written text in this font in italics or in bold, you will have to use Futura-Oblique or Futura-Bold, respectively.

Certain design programs or word processors allow you to adapt the style or the size of these fonts artificially. You only have to select the text and to put it in italics or in bold via the respective shortcuts. This method can seem very handy but it is recommended to avoid it because of the lesser quality of these artificial styles.

Solution

Replace the font by its respective “Bold”, “Italic” or “Outline” variant. You can do this in your design program or word processor and then create your PDF file again, or do it directly in the PDF document with one of the Acrobat plug-in solutions:

- Interactively with Enfocus PitStop Inspector: select the text with Edit Paragraph  of Enfocus. Click Window and Show PitStop Inspector and select, in the Text tab, another font by clicking on the Fonts button.
- In the entire document with a global change or an action list.

Errors and Cautions of the Category “Font Embedding”

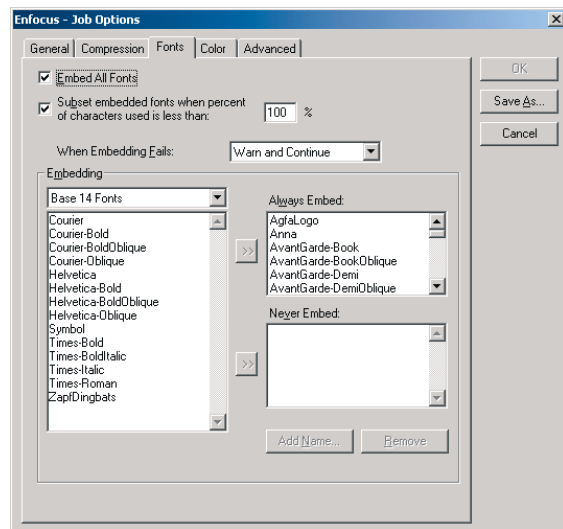
Font "X" has been embedded

Meaning

Embedding fonts in a PDF document means that every character of this font is copied and stored in the PDF document. This is useful if you create PDF documents to be displayed on different systems and to be printed on different devices: these are often systems that do not contain exactly the same fonts. If a font is embedded in a PDF document, you will always be able to edit this text in this font, even though the font is not installed on your computer.

When you create new PDF files, make sure that you embed all the used fonts. You can do this as follows in Acrobat Distiller:

- 1 Choose Settings > Job Options.
- 2 Click the Fonts tab.
- 3 Select Embed All Fonts and add all the required fonts in the Always Embed list



[Font "X" has been embedded]

Errors and Cautions of the Category “Text”

Text point size <n> is less than <n>

Cause

Some text is smaller than the minimum required point size defined in the PDF/X profile. This problem can be caused by the following:

- An illustration containing text of a small point size (e.g.: 10 pt) was inserted in a DTP program and then scaled down (e.g.: 70%).
- A font which is too small may have been used in the DTP program itself.

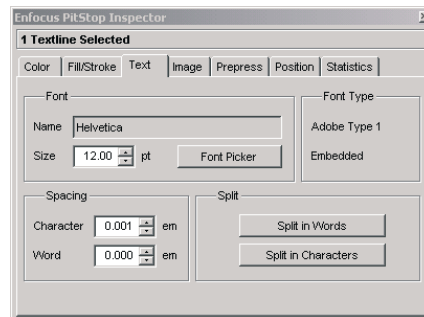
Some PDF/X profiles contain a second preflight check that looks for text that is smaller than a given point size when using a given number of separations. See [“Text point size <n>, colored with <n> or more color plates, is less than <n> points”](#) on page 202.

Solution

You can increase the text size in Adobe Acrobat (using one of the many PDF editing solutions introduced in this guide), or in your word processor, design or drawing program.

In Enfocus PitStop Professional, proceed as follows:

- 1 Select the text that is too small.
- 2 Choose Window > Show PitStop Inspector.
- 3 Display the Text tab.
- 4 Specify the new text size in the Size field.



Text point size <n>, colored with <n> or more color plates, is less than <n> points

Cause

Some text has been found in the PDF document that:

- Occurs on a given number of color separations and
- Is smaller than a given point size

If small text occurs on several color separations, the readability can become limited. The slightest mistake in the alignment of the printing plates causes printing problems as shown in the illustration.

[Text point size <n>, colored with <n> or more color plates, is less than <n> points]



The plates are correctly aligned on the left. On the right, a slight anomaly is visible. The text is thus less readable. When using small text, even the smallest anomalies sometimes unavoidable when aligning the plates become visible.

Solution

Make sure that the text that occurs on different color separations is larger than the minimum required point size mentioned in the preflight report. You can increase the text size in your PDF document in several ways:

- You can change the size in the source files and create a new PDF document.
- You can change the size in the text with PitStop Inspector. Choose Window > Show PitStop Inspector > Text.
- You can make a global change to maximize the text size. Choose Show PitStop Global Change > Font.
- You can create an Action List. Choose Show PitStop Action List Panel and create an Action List that will give the text a size of at least 6 pt.

Black text is set to overprint

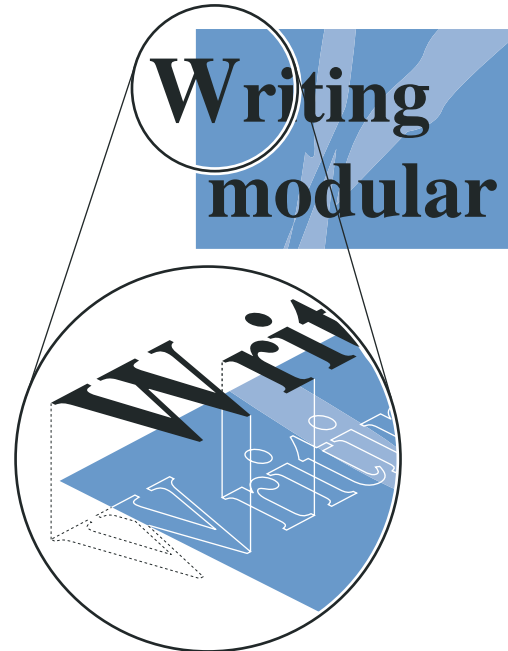
Meaning

Text —especially fine text or text set at a small point size— on colored backgrounds is extremely difficult to print in register. The slightest misregistration can become noticeable as small gaps can appear between the text and the underlying colored elements.

To avoid this problem, black text is set to print on top of any colored backgrounds. This technique is known as overprinting. Overprinting preserves the legibility of the text.

Overprinting black text compensates for misregistration.

You can specify overprinting only for 100% black text because printing text of any color other than solid black over any other colored background might cause the overlapping inks to blend, which could produce undesirable colors.



Text does not knock out or white text has been set to knock-out

Cause

The PDF document contains white text that does not knock out. If your document contains white text, you have to make sure that the colors behind the text are not printed. This is called knock-out printing: the white text should knock out the colors on the other separations. The profile checks if the PDF document contains any white text that would not be printed this way.

Solution

If the error “Text does not knock-out” appears in the preflight report, check the knock-out and overprint-related color definition settings in your DTP software package.

The PDF Profile PDF/X-1a PLUS Commercial CMYK v1 will fix this problem automatically and the report will show the error message “White text has been set to knock-out”.

Invisible object removed

Meaning

Invisible text has been detected in the PDF document and the PDF/X-1a profile has removed it automatically. Invisible text is text that has no fill or stroke color.

Errors and Cautions of the Category “Line Art”

Changed line width

Meaning

Lines have been detected in the PDF document with a stroke weight of less than a given point size. Depending on the resolution of the output device on which the document is printed, lines thinner than this point size may disappear in the output document.

The line weight has automatically been increased to the minimum required point.

Number of nodes <n> in the single path is more than <n>

Cause

The number of anchor points inside a path is higher than the maximum number allowed. This often happens when you automate the clipping of bitmaps or their conversion to line art. This can result in an error of the type “Limitcheck” on the RIP: the path is too complex to be handled.

Solution

Create the line art again manually or simplify it. Adobe Illustrator, for example, enables you to split line art, so that the components contain less anchor points. Some design programs can also simplify line art.

Invisible object removed

Meaning

An invisible line object is line art the lines of which do not have any stroke weight or color. These line-art objects have been removed automatically by the PDF/X-1a profile.

Errors and Cautions of the Category “Image Position”

Image is rotated

Meaning

Pixel images in the PDF document have been rotated slightly:

- over an angle that is not a multiple of 90°
- over an angle that deviates less than 3° .

The purpose of this check is to detect pixel images which may have been rotated by accident. For example, if you had a Rotate tool selected and click in the image by accident, you may have rotated the image slightly without even noticing it.

X and Y scaling of image differ 3 %

Cause

An image in your PDF document has been scaled non-proportionally. The scaling percentages along both the X- and the Y-axis are not equal. There is a difference of more than 5 % between these 2 values. The proportions between height and length of the image are changed, resulting in distortions in the image, e.g. squares have become rectangles.

Solution

If non-proportionally scaled images are necessary, you can create them in an image editing software or in a drawing program and insert them again in the design program. Create the PDF file again.

Errors and Cautions of the Category “Image Resolution”

Image contains alternates that are default for printing

Cause

Alternate images are used to store both a viewing-resolution and a printing-resolution version of an image in a single PDF document. Usually, the main image has the label “default for printing”, but it is also possible for one of the alternates to carry this label. In this scenario, Acrobat uses the main image for on-screen display, but prints the alternate.

Not all software is capable of handling alternate images that are the default for printing. Such software always prints the main image, regardless of the labelling of the alternate images. This is why the PDF/X standard does not allow alternate images to be the default for printing.

Solution

In your design or editing software, do one of the following:

- Remove the alternate image that has been set as the default for printing.
- Set the main image as the default for printing.

Removed alternate images

Meaning

Alternate images can be used to store both a viewing-resolution and printing-resolution version of an image. These alternate images have been removed automatically by the PDF/X-1a profile.

Effective resolution of images is less or larger than <n> dpi

Cause

The resolution of color, grayscale or black-and-white images is too high or too low, depending on the allowed maximum or minimum values in the PDF/X profile. The table below lists the required minimum and allowed maximum values for color, grayscale or black-and-white images per profile.

Image type	Resolution	PDF/X-1a:2001 v2	PDF/X-1a PLUS Magazines v2	PDF/X-1a PLUS Newspapers v2	PDF/X-1a PLUS Commercial CMYK v1
Color or grayscale	Minimum	○	100 dpi	100 dpi	150 dpi
	Maximum	○	400 dpi	200 dpi	450 dpi

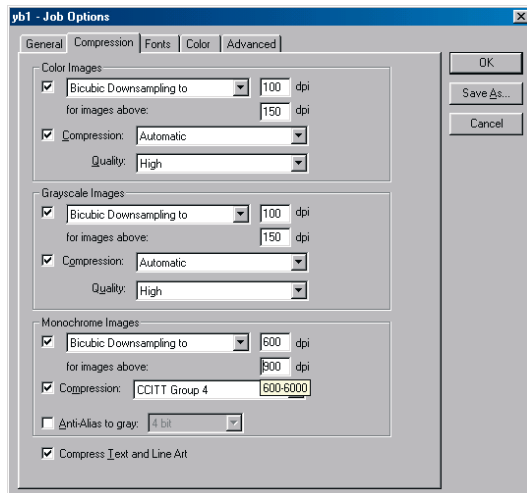
Image type	Resolution	PDF/X-1a:2001 v2	PDF/X-1a PLUS Magazines v2	PDF/X-1a PLUS Newspapers v2	PDF/X-1a PLUS Commercial CMYK v1
Black-and-white	Minimum	○	600 dpi	600 dpi	600 dpi
	Maximum	○	2000 dpi	1270 dpi	3600 dpi

○ = not checked

Solution

If the effective resolution of an image is too low, you have the following options:

- Scan the original image at a higher resolution
- Check the resolution of the original image and make sure that the image has not been scaled up at a later stage, e.g. after it has been imported in a DTP program.



- Check the downsampling-related Job Options in Acrobat Distiller. Choose Settings > Job Options and display the Compression tab. Make sure the downsampling is not selected or that the values to which images have to be downsampled are higher than the required minimum values.

Changed image resolution

Meaning

A black-and-white or color image had a higher resolution than the value allowed. The resolution of an image is the amount of information or detail it contains, expressed in dots per inch (dpi). High-resolution images contain a lot of information and result in large file sizes. That is why the profile checks the image resolution in your documents. If the profile finds images of which the resolution exceeds the maximum values, it will down-sample them. If downsampling is done by the PDF/X profile, the bicubic downsampling method will be used.

The following maximum values are applied for color and black-and-white images:

Image type	Resolution	PDF/X-1a: 2001 v2	PDF/X-1a PLUS Magazines v2	PDF/X-1a PLUS Newspapers v2	PDF/X-1a PLUS Commercial CMYK v1
Color or grayscale	Maximum allowed	○	400 dpi	200 dpi	450 dpi
	Image is down-sampled to	○	300 dpi	150 dpi	300 dpi
Black-and-white	Maximum allowed	○	2000 dpi	1270 dpi	3600 dpi
	Image is down-sampled to	○	1200 dpi	800 dpi	○

○ = not checked or downsampled

Errors and Cautions of the Category “Image Compression”

Image compression changed

Meaning

Depending on the type of images you are dealing with, different compression methods are recommended. Using the appropriate compression methods can significantly reduce the file size of the PDF document. That is why the profile checks which compression method is used in your PDF document. It checks the compression methods used for color or grayscale images on the one hand and for black-and-white images on the other. If the profile detects an inappropriate compression method, it will automatically change it and apply the following methods:

- ZIP compression for color or grayscale images
- CCITT compression for black-and-white images

Errors and Cautions of the Category “OPI”


Removed OPI

Cause

An object contains OPI information. As the PDF file must have created with images with a higher resolution, the OPI is not of any use anymore. Moreover, the OPI information is superfluous and can cause some problems. With PageMaker, for example, it can be impossible to work with images containing OPI information. Even if you have used a higher resolution, the OPI information can still be associated to the image.

Solution

Use images without OPI information or delete the OPI information from the file. You can proceed in two ways:

- Click to clear the “Preserve OPI Comments” setting in Acrobat Distiller. You will find this setting on the Advanced tab of the Job Options.
- Select an image containing OPI information with the Select Object  tool of Enfocus PitStop Professional. Click Windows and Show PitStop Inspector. Click the Prepress and OPI tabs, and the Remove Information button.

Tip: An action list enables you to quickly find all the objects containing OPI information. Select Window and Show PitStop Action List Panel. Click the Managing tab and New. Click Add and, in the dialog box (New Action Type) that appears, click Gather OPI information on the Informs tab, Add, Close and OK. On the Executing tab, select Complete document and Create report and click Execute. The action list is executed and a report is displayed with hyperlinks to images containing OPI information in the PDF.

Errors and Cautions of the Category “Annotations”

Removed annotation

Meaning

The PDF document contains one or more annotations of either one of the following types:

- Hyperlink
- Movie and sound
- Trapping
- Printer marks
- File attachment
- Custom

Annotations of these types can cause problems in a work environment. For more information on the different types of annotation, see Acrobat Help (Help > Acrobat Help).

The offending annotation has automatically been removed by the PDF/X-1a profile.

Annotation setting changed to non-printing

Meaning

Annotations made in a PDF document can be set to print or not to print. One or more annotations set to print were found in the checked PDF document. This is not recommended in a work environment.

The annotation setting is changed and set not to print (non-printing).

Errors and Cautions of the Category “Metadata”

Removed form fields, thumbnails, bookmarks, article threads or unused destinations

Cause

The document contains the following types of metadata:

- Form fields
- Thumbnails: a minimized reproduction of the pages in your PDF document. Thumbnails can be a useful tool for visual navigation or to change the page arrangement in the PDF document (you only have to drag the thumbnails to rearrange the pages). Adobe Acrobat 5 automatically creates the thumbnails again when you open the Thumbnails Palette (Window > Thumbnails).
- Bookmarks: the titles and subtitles of your document in a separate list. Bookmarks are also a very useful tool for navigation: you only have to click on a title in order to find the required part or chapter.
- Article threads: a sort of “thread” in your PDF document that follows the development of your document when you read it on screen. Article threads are useful when the text is made up of several columns, with text flowing across pages.
- Unused destinations: links to another PDF document. Using destinations allows you to create a linked collection of documents. Unused destinations contain no specific link to another file.

All metadata are very useful, and sometimes necessary, to make a document readable on screen, but they can increase the size of a file considerably. They are moreover not necessary for PDF documents set to print. If the PDF/X-1a profile finds metadata in the document, an error message appears in the report.

Solution

The PDF/X-1a profile automatically removes all the metadata from the PDF document.

Document contains actions

Cause

Certain special effects can be added to PDF documents, in the form of actions that are executed when a bookmark, link or form field is clicked, or when a specific page is viewed.

Typical examples of this kind of actions:

- Jumping to a specific page.
- Playing a sound or movie clip.
- Execute a Javascript function

The PDF/X standard does not allow a PDF document to contain any actions.

Solution

Remove all actions from the PDF document. Do one of the following:

- Suppress the exporting of links and actions in your source application.
 - If you have Enfocus PitStop Professional, create an Action List with the following commands: either "Remove all annotations" or "Remove annotations of type X" (e.g. links, Javascript), and "Remove actions".
 - Use the Adobe Acrobat tools to remove each individual action.
-

Removed actions

Meaning

The PDF/X standard does not allow actions in a PDF document. Actions can include:

- Custom Javascript functions
- Standard actions that are executed when a link or bookmark is selected, such as jumping to a specific location in the document, playing a movie or sound clip, etc.

The PDF/X Profile has automatically removed the actions from the PDF document.

Errors and Cautions of the Category “PDF/X”

Removed embedded PostScript fragment

Meaning

The document contains embedded PostScript fragments. Embedded PostScript fragments are PostScript instructions for printing that could cause problems. The PDF/X-1a profile has automatically removed these embedded PostScript fragments. This check allows you to find all fragments of embedded PostScript in the PDF document. Embedded PostScript fragments may change the appearance of the printed document but do not show up in the screen preview.

Page description contains inline PS code

Meaning

See [“Removed embedded PostScript fragment”](#) on page 222.

Trapnet annotation does not conform to PDF/X-1a requirements

Cause

In printing, even the slightest misregistration of the plates can cause gaps or color shifts between colored objects to appear. Trapping is a technique that compensates for misregistration by expanding adjacent colored objects so that they overlap. Trapping can be performed either before PDF creation, by the source application, or during the RIP-process.

If the traps in a document were added before the PDF document was created, they are included in the PDF file as *trap networks*. A page may have more than one trap network, e.g. one for each intended output device, but all the different trap networks are stored in the same *trap network (trapnet) annotation*. When printed, the trapnet annotation provides all the required trapping information for the page.

When trapnet annotations are found in the document, PDF/X-1a requires that:

- Trapping occurs only when all the fonts in the document are embedded.
- The CMYK color space is used.

Solution

When you create new PDF files, make sure that you embed all the used fonts. You can do this as follows in Acrobat Distiller:

- 1 Choose Settings > Job Options.
- 2 Click the Fonts tab.
- 3 Select Embed All Fonts and add all the required fonts in the Always Embed list.

Also, check your source documents for occurrences of color spaces other than CMYK, and convert them to CMYK. If you have Enfocus PitStop Professional or another PDF/X solution, it is easier to change this in the PDF document. Proceed as follows:

- 1 Click the cross sign (X) in the report.

The Enfocus PitStop Navigator Panel appears and the first object not in the CMYK color space is visible.

- 2 Choose Window > Show PitStop Inspector and check the color values.
- 3 Choose Window > Show PitStop Global Change.
- 4 In the Object tab > Color, in the "From" area, click Grab Fill.

Tip: Also check the color management settings in Enfocus PitStop Professional. For more information, read the following chapters in the Enfocus PitStop Professional User Guide:

- "Setting Your Enfocus PitStop Professional Preferences"

and

- "Chapter 11: Color Management"

- 5 In the "To" area, select the color you want to which you want to convert the offending color. You can do this in several ways:

- Click Load and load a color from the repository.
- In the PDF document, click an object that has the right color and then click Grab Fill in the Global Change panel.
- Specify the CMYK colors and click Save in order to reuse this color later on.

- 6 Click Apply.

7 Select Apply to > Complete Document and click Apply to carry on this change in the entire PDF document. If you still have other PDF documents containing this specific color, click Save as Action List.

PDF/X version key set to PDF/X-1a:2001

Meaning

The PDF/X version key identifies which version of the PDF/X standard is followed by the document. If the version key is not set correctly, the document may not be eligible for further processing.

The PDF/X version key has been set to PDF/X-1a:2001.

Annotation lies inside printable area

Cause

The PDF/X standard does not allow annotations inside the bleed box (or, if no bleed box has been defined, the trim box). Annotations are not allowed in the printable area of a document, because they may cause differences between the printed output and the on-screen representation.

Solution

Remove the annotations from the PDF document. You can do this in Adobe Acrobat by selecting Tools > Comments > Delete All.

Moved objects outside of printable area

Meaning

The PDF/X standard does not allow annotations inside the bleed box (or, if no bleed box has been defined, the trim box). Annotations are not allowed in the printable area of a document, because they may cause differences between the printed output and the on-screen representation.

The PDF/X Profile has automatically moved the offending annotations outside of the bleed box (or, if no bleed box has been defined in the document, outside of the trim box).

Errors and Cautions of the Category “PDF/X Color”

Changed Output Intent

Meaning

In PDF/X a PDF document must contain the intended output intent. The output intent identifies what the final output destination of the document is, enabling everybody involved in the workflow to take the output intent into account. For example, a color proof may take into account the type of paper on which the document will be printed.

This check verifies that the output intent is present and valid according to PDF/X rules, and if necessary, sets the output intention in a PDF document, either to a standard ICC characterization name or to a CMYK ICC profile.

