Gernot Hoffmann

Identification of embedded ICC profiles in PDFs by Acrobat Professional 8

Updated February 26 / 2013

Contents

1.	Introduction	2
2.	Color Settings	3
3.	Acrobat Settings	5
4.	Example	6
5.	Identification	7
6.	Convert Colors	8
7.	References	9

Settings in Acrobat Professional

Edit > Preferences > Page Display > Custom Resolution 72 dpi

Edit > Preferences > Color Management > Custom

- RGB sRGB
- CMYK ISOcoated-v2(eci)
- Gray Black Ink ISOcoated-v2(eci) derived from ISOcoated-v2(eci) in Photoshop

The file size of this doc is fairly large because of two embedded CMYK profiles.

1.1 Introduction

Opposed to the Standard PDF/X-1a, a general PDF can contain arbitrary mixtures of RGB-, CMYK-, Gray- and Spot-Ingredients.

Such a document is useful only in rare cases:

1. PDF for a calibrated inkjet, where images are left in one or more calibrated RGB spaces, but vector graphics are defined directly by CMYK inks.

2. PDF for different CMYK spaces (late binding). In this case the images can be left in a calibrated RGB space for late conversion for the final printing process. Vector graphics should be already in an appropriate (average) CMYK space, in order to avoid problems with CMYK-CMYK conversions which most likely destroy the black generation.

It happens very often that PDFs by less skilled authors contain these unpleasant mixtures unintentionally.

At least for raster images there is some hope that the document can be converted into the same CMYK output space. This is possible if each image is tagged by an ICC profile, which should be the correct one, of course.

Adobe Acrobat Professional, here Version 7, can be used to identify embedded ICC profiles.

The test document contains an image in six versions for these color spaces:

RGB	sRGB
RGB	aRGB (Adobe RGB 1998)
CMYK	ISOcoated-v2(eci)
CMYK	Euroscale Coated v2
Gray	Black Ink - ISO Coated-v2(eci)
Gray	Black Ink - Gray Gamma 2.2

One should not use Gray Gamma or Gray Dot Gain for Gray. It is better to generate a derived one-channel Gray profile from the respective CMYK profile. This can be done in Photoshop by

Edit > Color Settings > Gray > Load Gray > ISOcoated-v2(eci) (for instance).

2.1 Color Settings / First Set

The first set contains sRGB, ISOcoated-v2(eci), Gray Black Ink-ISOcoated-v2(eci) and (here not tested) Spot Black Ink - ISOcoated-v2(eci).

Color Settings	
Synchronized: Your Creative Suite applications are synchronized using the same color settings for consistent color management.	OK
	Cancel
Settings: sRGB-ISO-ISO	Load
Working Spaces	Sava
RGB: sRGB IEC61966-2.1	
CMYK: ISO Coated v2 (ECI)	Fewer Options
Gray: Black Ink - ISO Coated v2 (ECI)	Preview
Spot: Black Ink - ISO Coated v2 (ECI)	
Color Management Policies	
RGB: Preserve Embedded Profiles	
CMYK: Preserve Embedded Profiles	
Gray: Preserve Embedded Profiles 💌	
Profile Mismatches: 🔽 Ask When Opening 🔽 Ask When Pasting	
Missing Profiles: 🔽 Ask When Opening	
Conversion Options	
Engine: Adobe (ACE)	
Intent: Relative Colorimetric 🔽	
Use Black Point Compensation	
Use Dither (8-bit/channel images)	
Advanced Controls	
Desaturate Monitor Colors By: 20 %	
Blend RGB Colors Using Gamma: 1,00	
Description	
Conversion Options: Specifies details on how you want color space	
conversions performed.	

2.2 Color Settings / Second Set

A second set may contain other settings, e.g. aRGB, Euroscale Coated v2, Gray Black Ink-Euroscale Coated v2 and (here not tested) Spot Black Ink-Euroscale Coated v2.

Color Settings	
Unsynchronized: Your Creative Suite applications are not synchronized for consistent color.	OK
	Cancel
Settings: Custom	Load
Working Spaces	Save
RGB: Adobe RGB (1998)	
CMYK: Euroscale Coated v2	Fewer Options
Gray: Black Ink - Euroscale Coated v2	Preview
Spot: Black Ink - Euroscale Coated v2	[]]
Color Management Policies	
RGB: Preserve Embedded Profiles	
CMYK: Preserve Embedded Profiles	
Gray: Preserve Embedded Profiles 💌	
Profile Mismatches: 🔽 Ask When Opening 🔽 Ask When Pasting	
Missing Profiles: 🔽 Ask When Opening	
Conversion Options	
Engine: Adobe (ACE)	
Intent: Relative Colorimetric 🔽	
Use Black Point Compensation	
Use Dither (8-bit/channel images)	
Advanced Controls Desaturate Monitor Colors By: 20 % Blend RGB Colors Using Gamma: 1,00	
Description Black Ink - Euroscale Coated v2 Copyright 2004 Adobe Systems Incorporated C:\WINDOWS\System32\spool\DRIVERS\COLOR\Black Ink - Euroscale Coated v2.icm	

3.1 Acrobat Settings / InDesign CS2

Numbers are unchanged and all profiles are embedded.

	uto-144-AllProfiles	one Compatibility: Acrobat 4 (PDF 1.3)	Output	Colour Conversion: No Colour Conversion	Destination: N/A	Profile Inclusion Policy: Include All Profiles	E Simulate Overprint	L PDF/X	Output Intent Profile Name: N/A	Output Condition <u>N</u> ame: N/A	Output Condition Identifier: N/A	Registry Name: N/A	Description Position the pointer over a heading to view a description.
xport Adobe PDF	Adobe PDF Pre <u>s</u> et:	S <u>t</u> andard: []	General Compression	Marks and Bleeds Output	Advanced	security Summary							

4.1 Example

These are the six test images. Because of embedded profiles the appearance should be the same in Acrobat. Adobe Acrobat (Reader) can define only one set of viewing conditions (see page 1), therefore different *untagged* images would look different.



5.1 Identification

Acrobat 8 cannot identify the Gray profiles (these are considered as Device Gray). The two RGB spaces and the two CMYK spaces are correctly used.

Preflight	×
Profiles 🖗 Results 🕺 Report 🕑 Comments 🥖 Edit Options 🔹	
Preflight profiles:	
🛛 🔊 🖉 List images using lossy compression	
🖉 🖉 💯 List invisible text objects	
🖉 🖉 💯 List non B/W objects	
👘 🔊 💯 List non CMYK objects	
- 🔎 🔎 List objects using ICC/Lab/calibrated color	
$\sim \mathcal{P}$ List smooth shades	
Purpose of the selected Preflight profile:	
Reports all page objects that use device independent color spaces (i.e. ICC based color spaces, Lab, CalRGB or CalGray color spaces).	
	-

Preflight	×
🖉 Profiles 🙀 Results 🔀 Report 🥩 Comments 🥖 Edit 🛛 Options 🔹	
Preflight profile "List objects using ICC/Lab/calibrated color" found the following information:	
🗄 🖳 📐 Document information	
Output Intents: none	
Layers: none	
Embedded files: none	
🔁 🧟 Color spaces	
🔤 🔐 DeviceGray color space	
🕀 🏦 ICC based color space: "Adobe RGB (1998)"	
🖻 🏰 ICC based color space: "Euroscale Coated v2"	
🖻 🏰 ICC based color space: "ISO Coated v2 (ECI)"	
🕀 🏦 ICC based color space: "ISO Coated v2 (ECI)"	
🕀 🏦 ICC based color space: "sRGB IEC61966-2.1"	
🖻 號 ICC based color space: "sRGB IEC61966-2.1"	
电 Fonts	-
Explanation of the selected result:	

6.1 Convert Colors

Colors in one or more color spaces can be converted into another space. Normally this is done for all images. Everything is here converted into ProPhotoRGB and this color space is defined as Output Intent. This works as well for EPS, placed in InDesign. For untagged images the document color space is assumed. The result of the conversion can be found here:

	MYK: Convert				
Device R	.GB: Convert				
Device G	iray: Convert				
Calibrate	d RGB: Convert				
Calibrate	d CMYK: Convert				
				_	
Action:	Convert			-	
estinatior) Space				
Profile:	sRGB IEC61966-2.1			-	
	ProPhoto RGB				
ane-Leve	ProPhoto-AbsCol				
age-reve	ROMM-RGB				
Blending I	SDTV (PAL)				▼
	SDTV (Rec. 601 NTSC)				
	SMPTE-C				
onvert Pa	Trinitron Monitor G22 D93				
onvert Pa	Wide Gamut RGB				
onvert Pa All				_	
onvert Pa All C Curre					
onvert Pa All C Curre	Coated FOGRA27 (ISO 126	547-2:200	4)	-	,

http://docs-hoffmann.de/colpdf27022008-ProPhoto.pdf

ed Profile as Source Color Space

Embed Profile as OutputIntent

O Don't Embed Profile

Preserve Black Objects

7.1 References

This doc:

http://docs-hoffmann.de/colpdf27022008.pdf

Gernot Hoffmann

February 29 / 2008 + February 26 / 2013

Website Load browser / Click here

http://docs-hoffmann.de/