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eProof Color Management (CM) Guide

1. Introduction

1.1. eProof has flexible and powerful, but complex CM engine. If you do not plan to use CM with eProof leave all configuration settings and folder/job/proof parameters by default.

1.2. If you want to use eProof CM features, you will need basic knowledge of CM, which you can acquire from www.color.org/faqs.pdf.

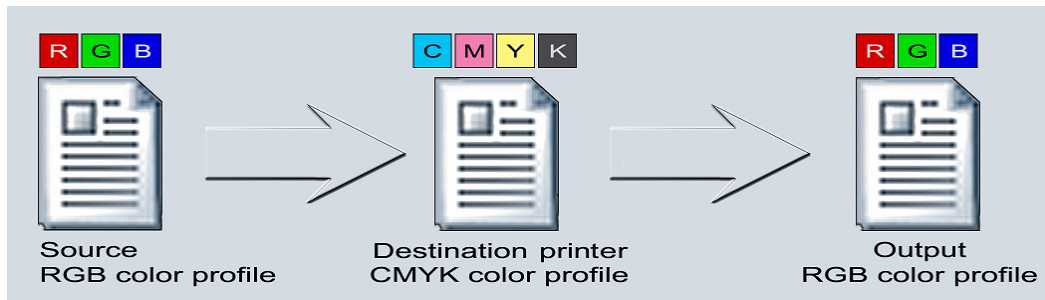
2. Soft Proofing

2.1. Fundamental idea of eProof CM is soft proofing. A user can see his document on screen just like how it will look printed on paper by a printing press. Usually printing presses have narrow color gamut, in other words initial colors may be distorted. Soft proofing technology allows to see this distortion on the monitor screen without making hard copy of a proofed document.

2.2. How does soft proofing work?

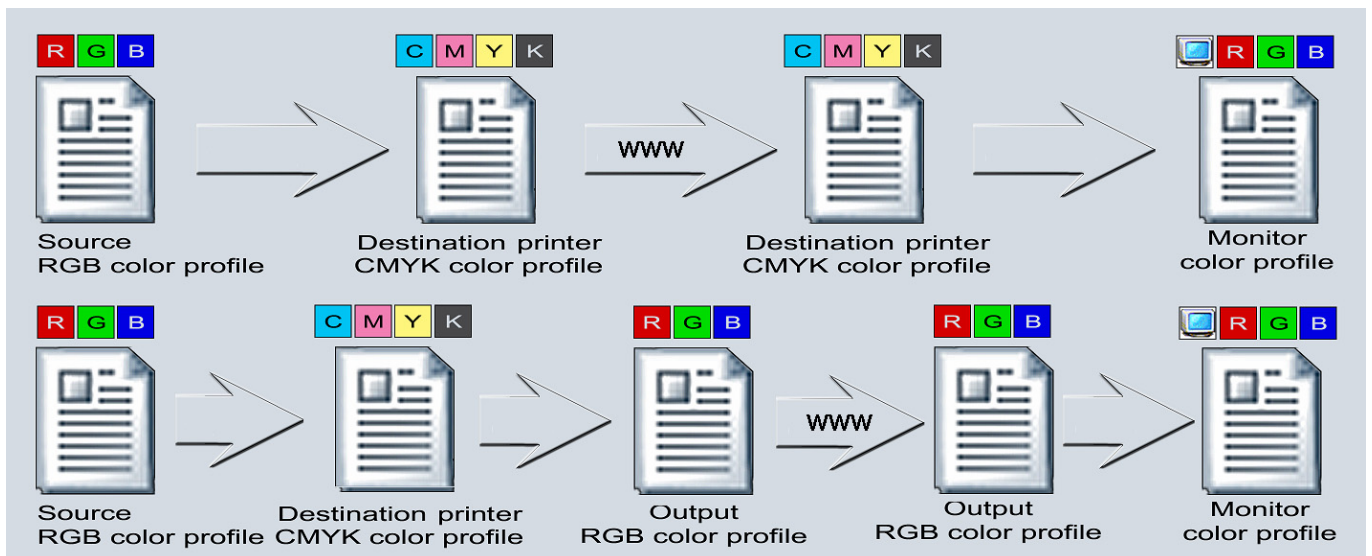
Printing press properties, or color representation facilities are defined by means of color profile (CP). As a rule, it is narrow color space CMYK CP.

During soft proofing the following conversion is performed:



Note, that a conversion is performed with proofs (pages), text labels below page images explain which color profiles are used during conversion.

During first conversion RGB->CMYK the original color space is limited by color rendering ability of specified printer, and already in distorted form it is converted back to RGB. But for really exact implementation of this scheme it is necessary to consider properties of specific monitor, in other words output RGB CP should be RGB CP of specific monitor.



CMYK or RGB data can be transferred to client with subsequent conversion to monitor color space. Second approach uses standard sRGB or ECI RGB color space, requires extra color conversion, but transferring of RGB data requires less bandwidth.

3. General Color Management schema in eProof

eProof provides convenient and flexible settings for color management tuning and managing.

Main factors that affect CM algorithms:

- type of a source proof – vector (PDF, etc.) or raster (.TIFF, etc.);
- “Enable Proofing to CMYK” and “Proofing to RGB” settings;
- color space of a source proof – CMYK or RGB;
- presence of embedded color profile.

3.1. Color Management settings in eProof

To set global (default) CM options, please go to **Administration** > **Settings** menu, **Color management** section.

To set custom settings for separate folder or job, enter job/folder details page.

Below is the list of options with short description:

Color management:		
Source RGB color profile	1	sRGB Color Space Profile
Source CMYK color profile	2	EuroscaleCoated
Source CMYK rendering intent	3	Relative
Use Embedded color profile(s)	4	Yes
Enable proofing to CMYK	5	Yes
Destination CMYK color profile	6	EuroscaleCoated
Destination CMYK rendering intent	7	Relative

(1), (2) **Source RGB color profile** and **Source CMYK color profile**: CP of source device (scanner, etc.) should be set as source CP.

(3) **Source CMYK rendering intent** is used in converting image from source CP to destination CP (perceptual – if source image is RGB).

(4) **Use embedded color profile**: this option affects only images with embedded color profiles. Embedded CP is used instead of source CP when this option is switched on.

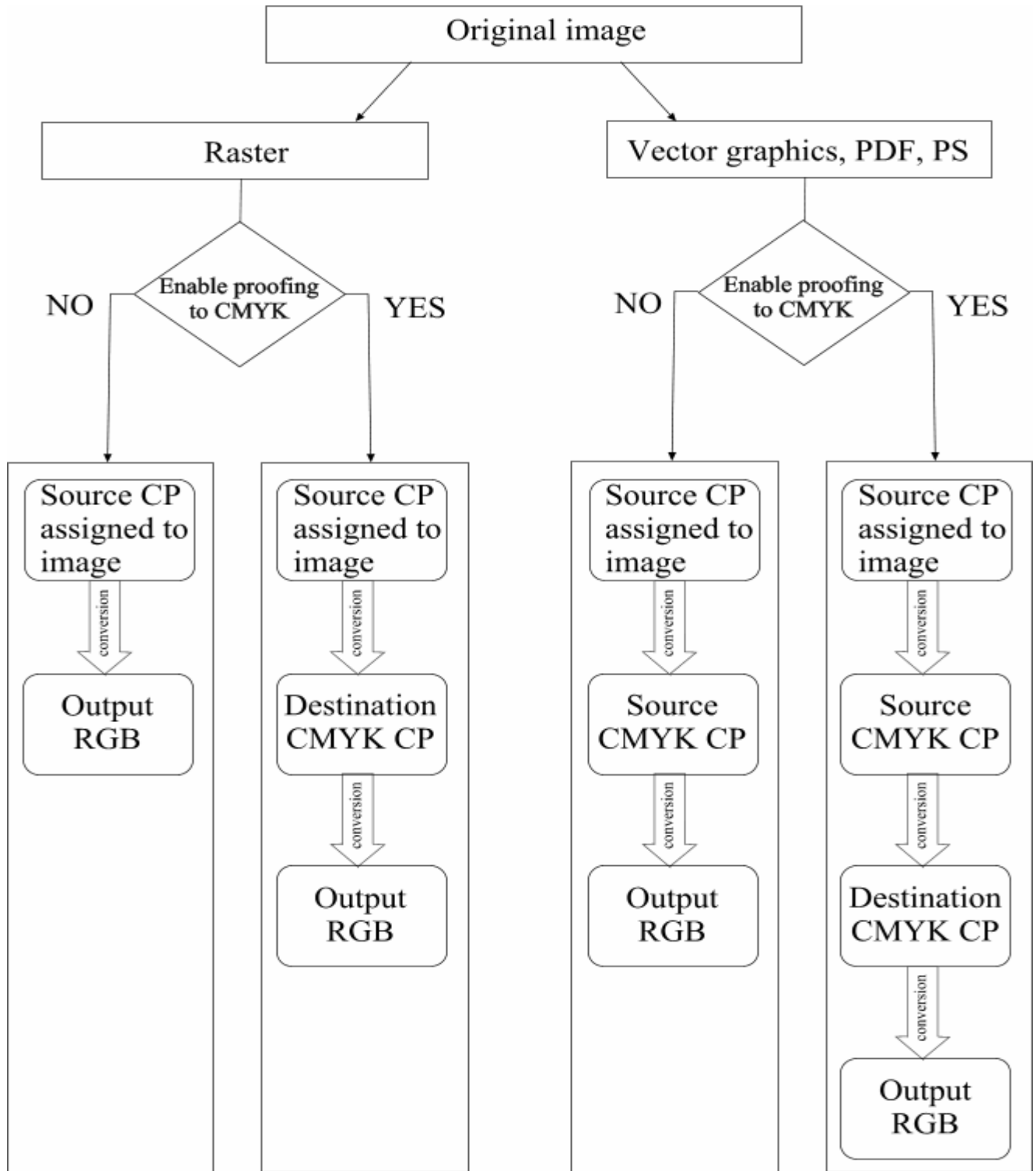
(5) **Enable proofing to CMYK** – if this option is set, eProof simulates printing (supposes proofing conversion). In case **RGB proofing** is set, file is left untouched.

(6) **Destination CMYK color profile**: CP of a printer or other output device should be set here.

(7) **Destination rendering intent** is used in image conversion from the destination CMYK CP to output RGB CP.

3.2. File conversions scheme

Below is a scheme of file conversions with "Enable proofing to CMYK" option on/off for different types of images:



Notes:

1. Image in output RGB is loaded to client where it is converted to monitor RGB.
2. Conversion to output RGB color space is performed to increase image loading speed (RGB requires less data to be transferred). Though it is possible to get accurate CMYK values in densitometer at that, as the tool gets this data from the server.
3. 'ECI RGB' is used as output RGB by default. This is wide-gamut RGB with D50 white point and gamma 1.8, and matches most industry-wide color proofers.

3.3. Adding and managing color profiles

CP used in CM (described above in 3.1) are referred by their logical names. Logical name is assigned to CP when loading it to eProof system. Only CP present in Color Profiles List can be used in CM conversions. Use 'Create Color Profile' function to add your desired CP to eProof system.

Job: not selected
 Job Selection Current Job Current Version Current Proof File Administration Logout @ ?

Back **Color Profiles**

Name ^	Type	Color space	Platform	Rendering intent
ECI RGB profile	monitor	RgbData	Macintosh	Perceptual
EuroscaleCoated	printer	CmykData	Macintosh	Perceptual
Gray-Profile	monitor	GrayData	Macintosh	Perceptual
Lab-Profile	spac	LabData	Microsoft	Perceptual
sRGB Color Space Profile	monitor	RgbData	Microsoft	Perceptual
USWebCoatedSWOP	printer	CmykData	Macintosh	Perceptual
YCMK	printer	CmykData	Macintosh	Perceptual

Create Color Profile

- Users
- Groups
- Logs
- Request Locks
- Settings
- RIV Settings
- Color Profiles**
- Spot Colors
- Servers
- Hot Folders
- Root Folder Details
- Notifications for Involved Users

3.4. Additional options

Use soft-proofed colors in densitometer: this option defines stage when information for separations and densitometer is extracted (affects only CMYK images)

- On: from proofed image (image converted to destination CMYK CP)
- Off: from image with source CMYK CP applied.

Job: not selected
 Job Selection Current Job Current Version Current Proof File Administration Logout @ ?

RIV Settings

Client settings

List of zoom levels (%'s)

Correction representation in the tree

Correction edit dialog title representation

Process 'Comment' field in anchor-based correction

Selected clipping correction opacity (%)

Unselected clipping correction opacity (%)

Correction refresh timeout (seconds)

Skip correction refresh procedure timeout (seconds)

Correction freeze timeout (seconds)

Server image processing settings

Default RIP resolution for PDFs

Use soft-proofed colors in densitometer

- Users
- Groups
- Logs
- Request Locks
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- RIV Settings**
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