

Patch 13.0 13.1, and 13.2 — Color Management

Intent

Patches 13.0 13.1, and 13.2 are meant to test the proper handling of PDF files that contain color managed objects within them. These patches use device independent data as well as objects in CMYK, but do not include any spot colors.

Testing guidelines

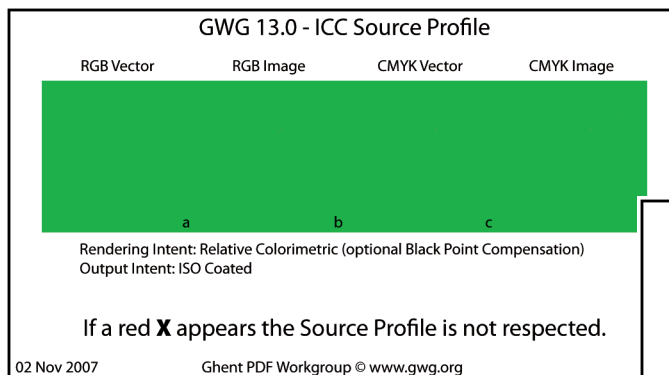
Test patches may be used in two ways:

- A single patch may be used to test a specific step in a workflow, such as a RIP
- Patches may be grouped with other patches to test the step of a workflow that will aggregate multiple files together, e.g. for partial page advertisements in a magazine.

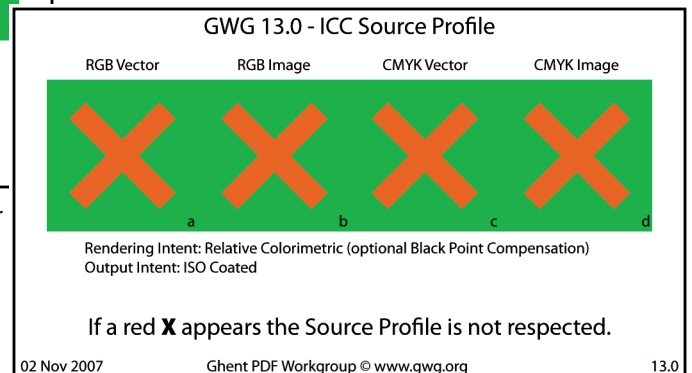
Method of evaluation

Method 1

A clear X indicates the improper handling of a file.



Correct rendering of the patch: all tests passed. No clear X is showing.



Incorrect rendering of the patch: all tests have failed. Each X indicates an incorrectly rendered test.

Description of tests

Patch 13.0

The intention of this patch is to identify correct or improper rendering of files using a source profile.

If an X clearly shows, the patch has been rendered incorrectly. Either the source profile was not used at all or an alternative source profile was used.

- a) A red RGB vector element uses an ICC profile that switches the red and green channel in order to result in a green appearance
- b) A red RGB image element uses an ICC profile that switches the red and green channel in order to result in a green appearance
- c) A red CMYK vector element uses an ICC profile that switches the cyan and magenta channel in order to result in a green appearance
- d) A red CMYK image element uses an ICC profile that switches the cyan and magenta channel in order to result in a green appearance

Every test consists of a background defined in DeviceCMYK that yields the color the test element has to become if rendered correctly.

The test element itself is constructed partly as a vector graphic (left part of the X) and an image (right part of an X)

The embedded output intent "ISO coated" has to be used as the destination profile in order to get the desired result.

Patch 13.1

The intention of this patch is to identify correct or incorrect rendering of files using any of the four rendering Intents.

If an X clearly shows, the patch has been rendered incorrectly.

If half an X clearly shows up either the vector element or the image element has been rendered incorrectly.

If a green X clearly shows in any test (a, b, c or d), then the patch was rendered ignoring the ICC based definition of the four tests as all.

If in any test the clear X is rendered to the color of any other test, then the rendering intent of the other was incorrectly used.

Every test consists of a background defined in DeviceCMYK that yields the color the test element has to become if rendered correctly.

The test element itself is constructed partly as a vector graphic (left part of the X) and an image (right part of an X)

All four test patches use "Coated Fogra 39 (ISO 12647-2:2004)" as source profile. As destination profile the embedded output intent "RenderingIntentTestprofile" has to be used in order to get the desired result.

Patch 13.2

The intention of this patch is to identify correct or incorrect rendering of files using overprinting vector elements defined in an ICC based CMYK.

This patch is comprised of:

- a) A white vector element defined in CMYK with a source profile is set to overprint and overprint mode is 1. Underneath a red CMYK vector element is placed.
- b) A green vector element defined in CMYK 75/0/100/0 with a source profile is set to overprint and overprint mode is 1. Underneath a red CMYK vector element is placed.

If an X clearly shows, the patch has been rendered incorrectly. The most likely cause is that the element was converted into the destination color space without changing the (OPM) to 0 during the conversion resulting in a device color that can overprint CMYK elements and giving a different visual result.

As stated in the PDF reference manual, an element defined in an ICC based color space must not overprint another DeviceCMYK element even if the overprint mode is 1 - the overprint mode has to be ignored.

If a PDF/X conforming workflow performs the color conversion from the source color space to the destination color space resulting in a device color, the overprint mode should be set to 0 so the overprint behavior of the object renders the same as defined in a calibrated color space.

Notes

The files are not suitable for use in building a pre-constructed test page, because in doing so the output intent in each file must either be lost, applied (e.g. by conversion of the whole patch to CMYK), or will affect all other patches from which the test page is built. The files can however be amalgamated together in order to test the amalgamating software.

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