

TECH NOTE

One of the key tasks that a user of Fiery XF® and Fiery proServer® faces is the correct setting of options that will directly affect the color reproduction of your files. Anyone familiar with Color Management settings in programs such as Adobe Photoshop or Adobe Illustrator will see the Color Management settings available in Fiery XF and Fiery proServer as being straightforward. There are, however, processes that operate, sometimes behind the scene, that need to be understood in order to ensure that you obtain the desired results.

A key characteristic of Fiery XF and Fiery proServer is that color conversions, or transforms, are handled differently when processing contone files (e.g. tiff, or jpg files), PDF files, and PostScript files. Because Fiery XF and Fiery proServer uses both the Adobe PDF Print Engine (APPE) and the Adobe Configurable PostScript Interpreter (CPSI) when processing the appropriate file types, our programs follow the rules set up by Adobe when files are processed.

This document provides many examples in order to help you to understand how various Color Management settings available within Fiery XF and Fiery proServer impact your color conversions. Although not every possible combination of options is presented, enough information is provided to ensure that you can make the correct decisions when setting up your Workflows and Output Devices.

This document begins with a key, showing you where the various options are set. Next are six examples detailing the processing of PDF files followed by two examples detailing the processing of PostScript files *without* the use of a Fiery proServer, then four examples detailing the processing of PostScript files *with* the use of a Fiery proServer. Three examples covering the processing of contone (raster) files are next, followed by a diagram showing how Fiery XF and Fiery proServer handle spot colors.

In a proofing workflow for PDF files, Example #4 or #4b are suggested, with #4b being the choice if you want to ensure that Fiery XF or Fiery proServer will not process RGB files. In a production workflow, example #6 should be considered as the "Simulation Profile: Use Media Profile" will retain more of the gamut in the original RGB files.

It is important to note that if you select the Adobe PDF Engine for processing PDF files and process a file that contains more than 31 color channels (Normally CMYK plus 27 additional spot colors) and/or a cut path, Fiery XF will automatically switch over to use the Adobe PostScript 3 Engine and will follow the PostScript color management rules.

Note also that the handling of Grayscale objects is controlled by the Adobe PDF Engine, the PostScript 3 Engine, and specific Fiery XF rules that go beyond the scope of this document.

Options Key

In Figure 1 below, on the left you will see an example of the settings section located in the upper left-hand corner of the example pages that follow. On the right are the Color>Color Management and the File>PS/EPS/PDF panels. Arrows indicate where the items from the settings example are located. The specific ICC Profiles that are selected in these examples have been selected for reference only. When setting up your Workflows in Fiery XF or Fiery proServer select ICC Profiles appropriate for your needs.

RGB Source Profile: Adobe RGB

CMYK Source Profile: GRACoL

Simulation Profile: GRACoL

Use embedded profiles, if available: Checked

Use PDF output intent, if available: Not Checked

PS/PDF Working Color Space: CMYK

PDF Print Engine: Adobe PDF Print Engine

The figure shows three panels from the Fiery XF software interface. The top panel is the 'Color Management' section under 'Color Adjustment'. It includes checkboxes for 'Use embedded profiles, if available' (checked) and 'Use dynamic rendering intent' (unchecked). Under 'Source profiles', it shows: RGB: AdobeRGB1998.icc, Rendering intent: Perceptual; CMYK: GRACoL2006_Coated1v2.icc, Rendering intent: Relative colorimetric (no paper white); Grayscale: EFI Gray Profile Linear.icc, Rendering intent: Relative colorimetric (no paper white); Multicolor: None, Rendering intent: Relative colorimetric (no paper white). Under 'Simulation profile', it shows: Use PDF output intent, if available (unchecked); Simulation profile: GRACoL2006_Coated1v2.icc; Rendering intent: Relative colorimetric (no paper white). The middle panel is the 'PS/EPS/PDF' section under 'Job Detection'. It includes checkboxes for 'Stop job processing if font is missing' and 'Divide multi-page PDF files into single-page jobs'. It shows 'Size definition: Media box', 'In-RIP separation: Enable', and 'Simulate overprinting in composite jobs' (unchecked). The 'Working color space' is set to 'CMYK'. The bottom panel is the 'Print engine' section, showing 'PDF print engine: Adobe PDF Print Engine' and 'Image EPS/PDF print engine: Native(Default)'. Arrows from the settings box on the left point to these specific settings in the panels.

Figure 1

Figure 2 shows the representation of a PDF file being processed. The file contains six graphics; three CMYK objects and three RGB objects. Two of the CMYK objects and two of the RGB objects contain embedded ICC Profiles while one CMYK and one RGB objects do not. In addition, when the PDF file was created, the artist included an Output Intent, SWOP in this example. Note also, the ".vpc" designation. This represents a Visual Plate Curve that would be generated from the "Visual correction" option in the Color Tools program. A Visual Plate Curve will be applied to both contone and screened CMYK files/objects while not affecting RGB files/objects.

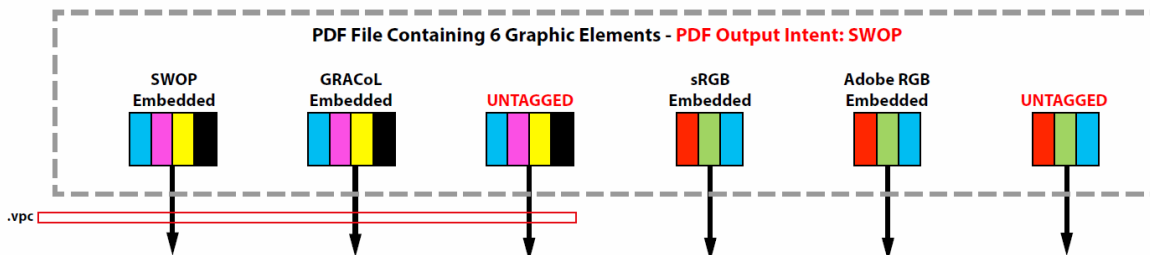


Figure 2

Figure 3 explains what each of the options located in the lower portion of each Processing Example represents.

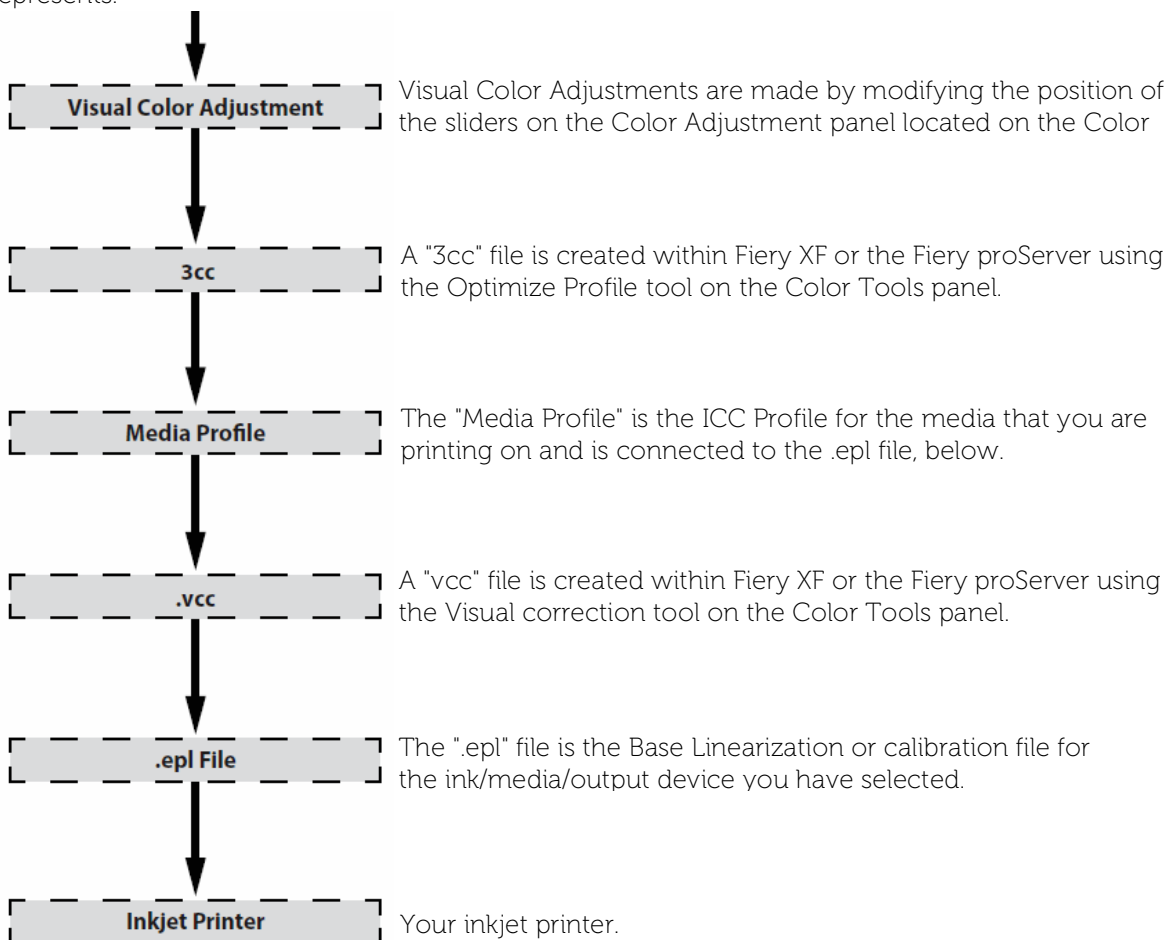
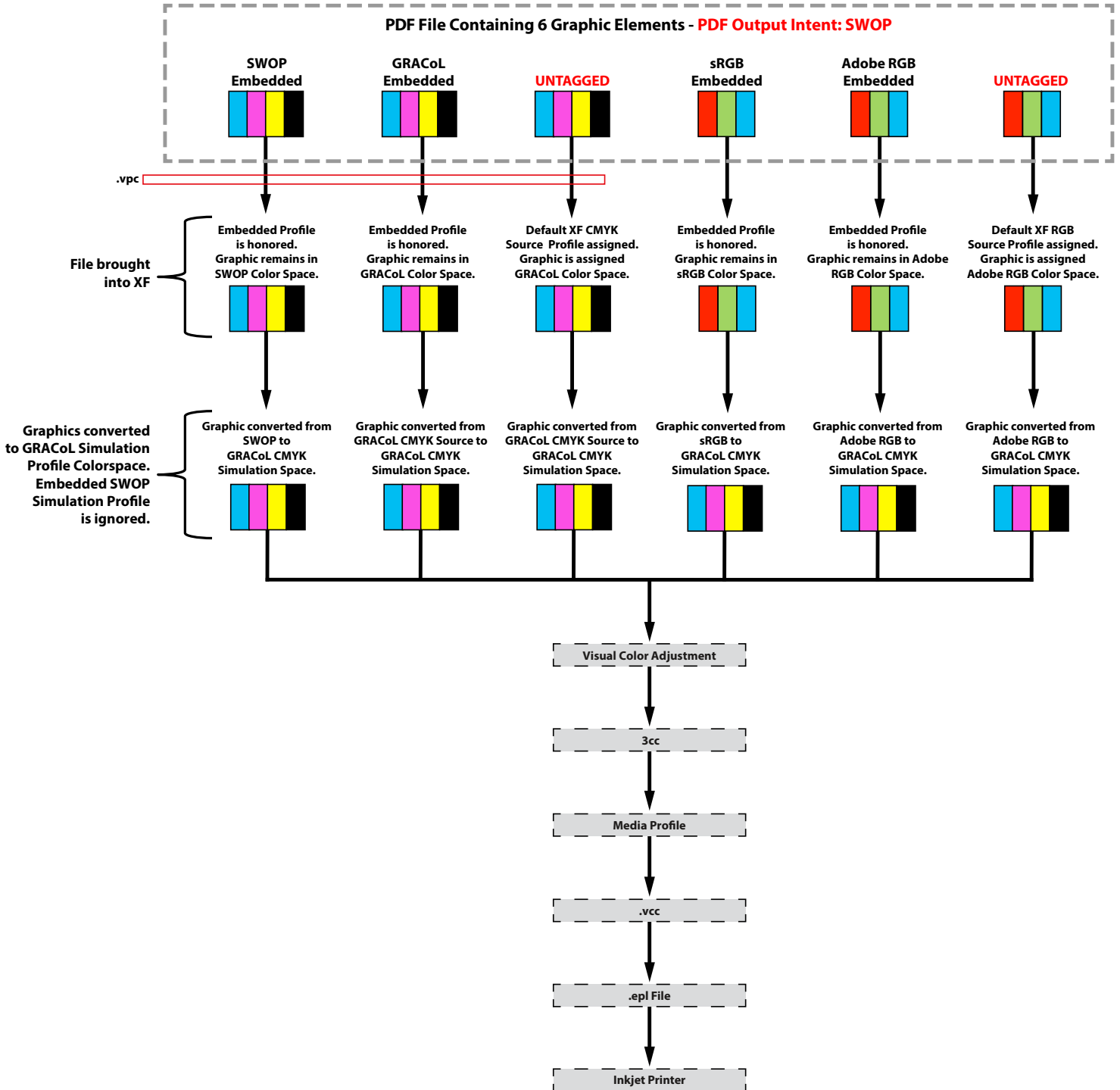


Figure 3

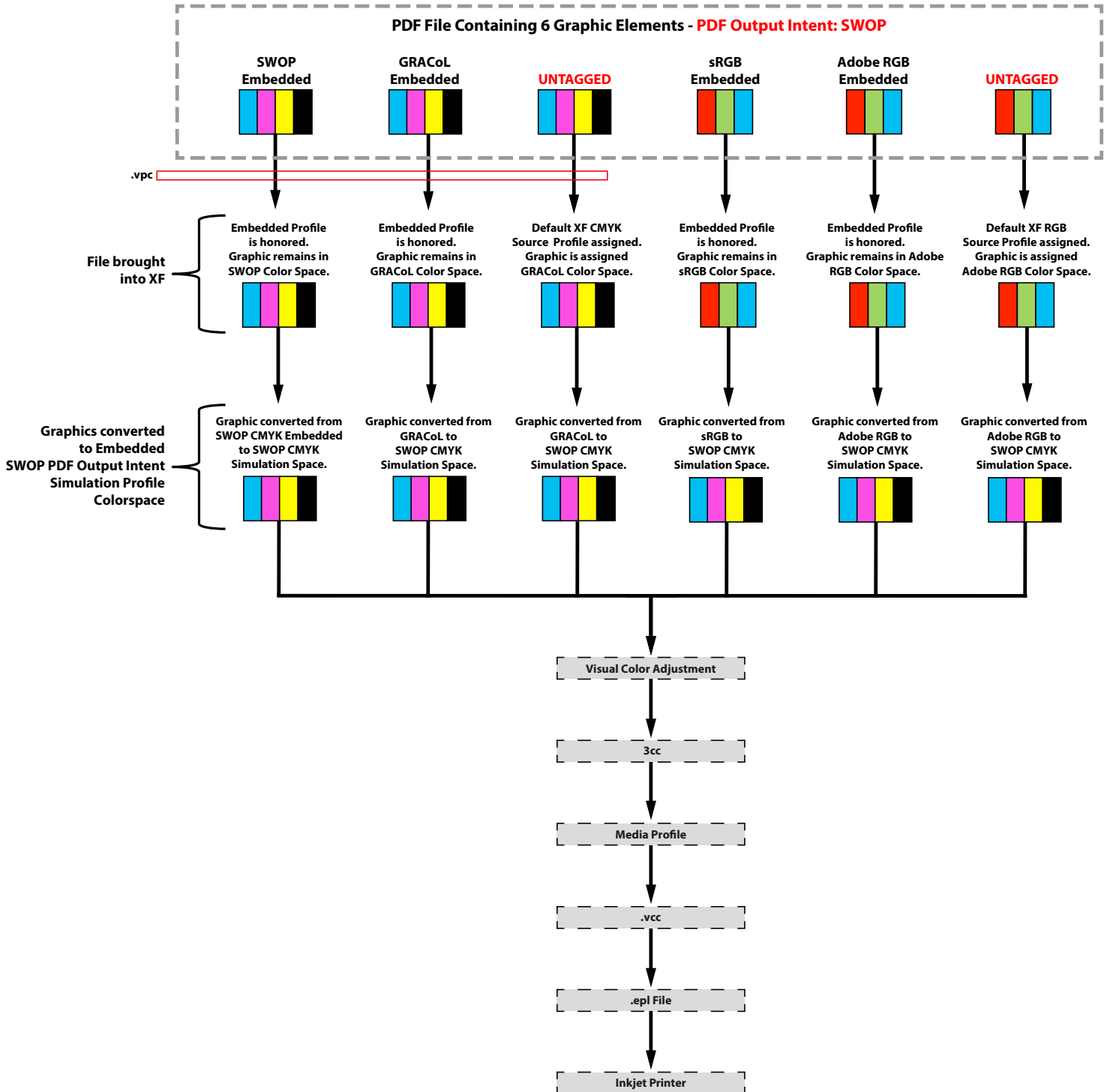
PDF File Processing Example #1

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **GRACoL**
 Use embedded profiles, if available: **Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK**
 PDF Print Engine: **Adobe PDF Print Engine**



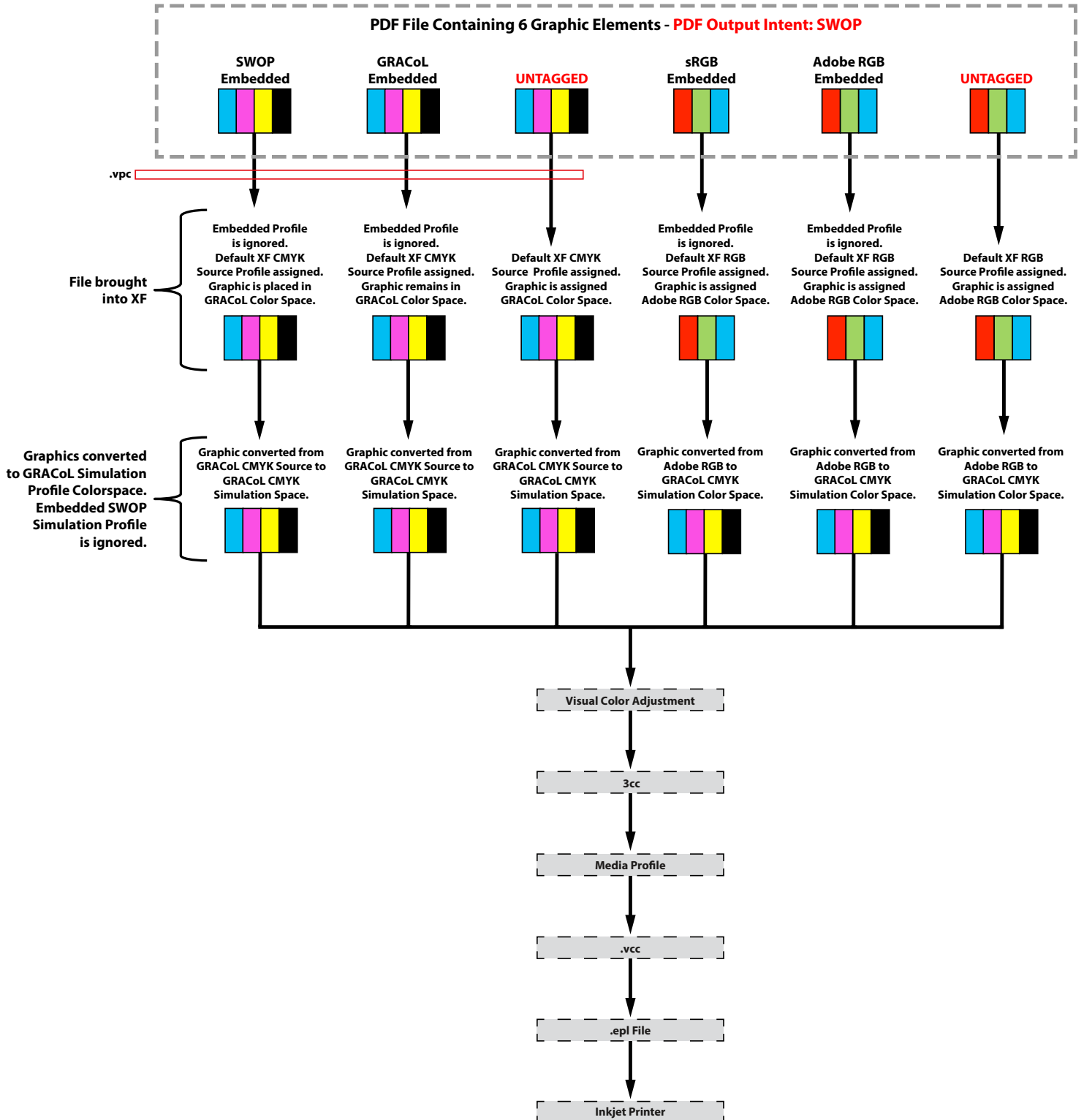
PDF File Processing Example #2

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **GRACoL**
 Use embedded profiles, if available: **Checked**
 Use PDF output intent, if available: **Checked**
 PS/PDF Working Color Space: **CMYK**
 PDF Print Engine: **Adobe PDF Print Engine**



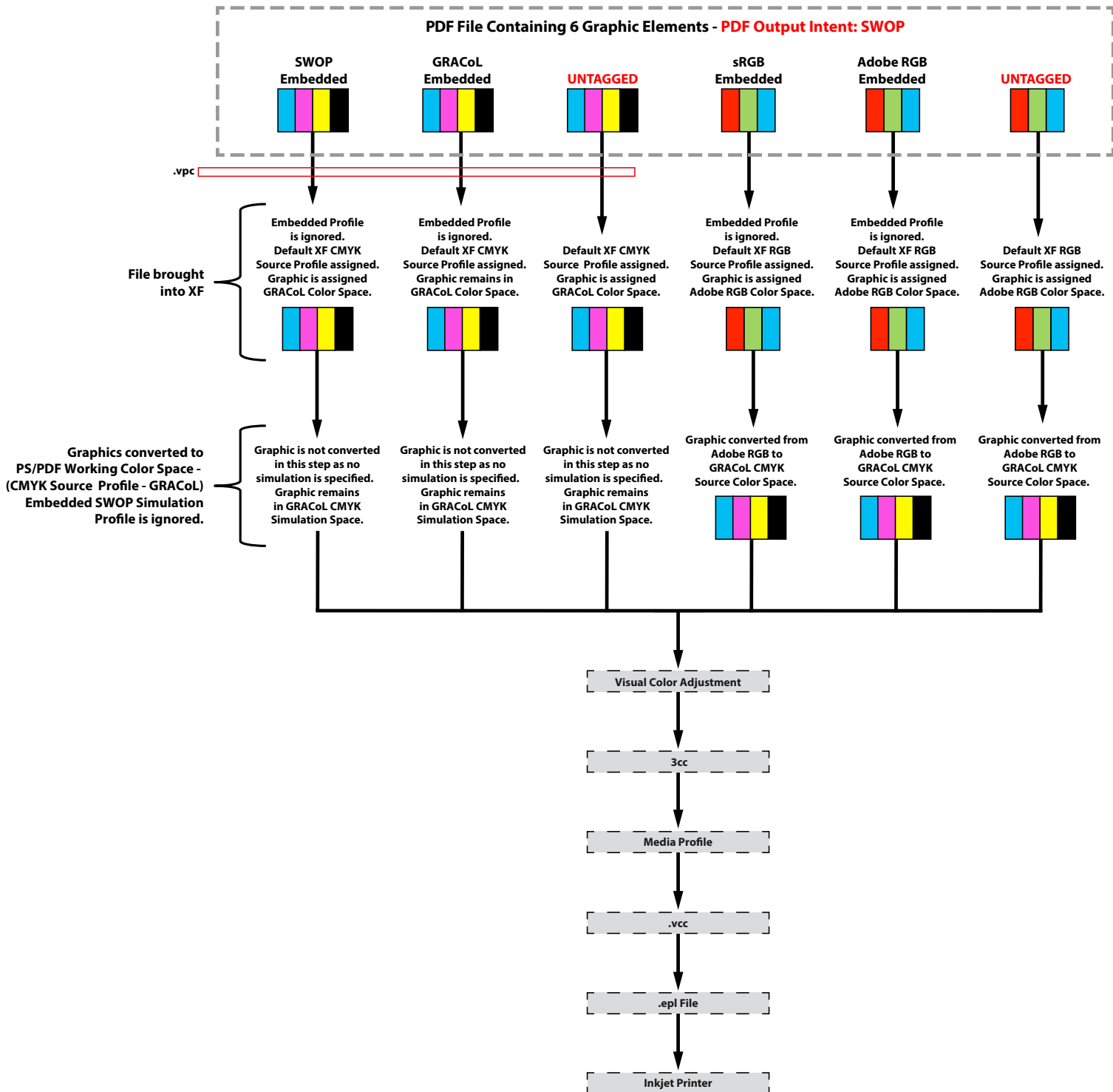
PDF File Processing Example #3

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **GRACoL**
 Use embedded profiles, if available: **Not Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK**
 PDF Print Engine: **Adobe PDF Print Engine**



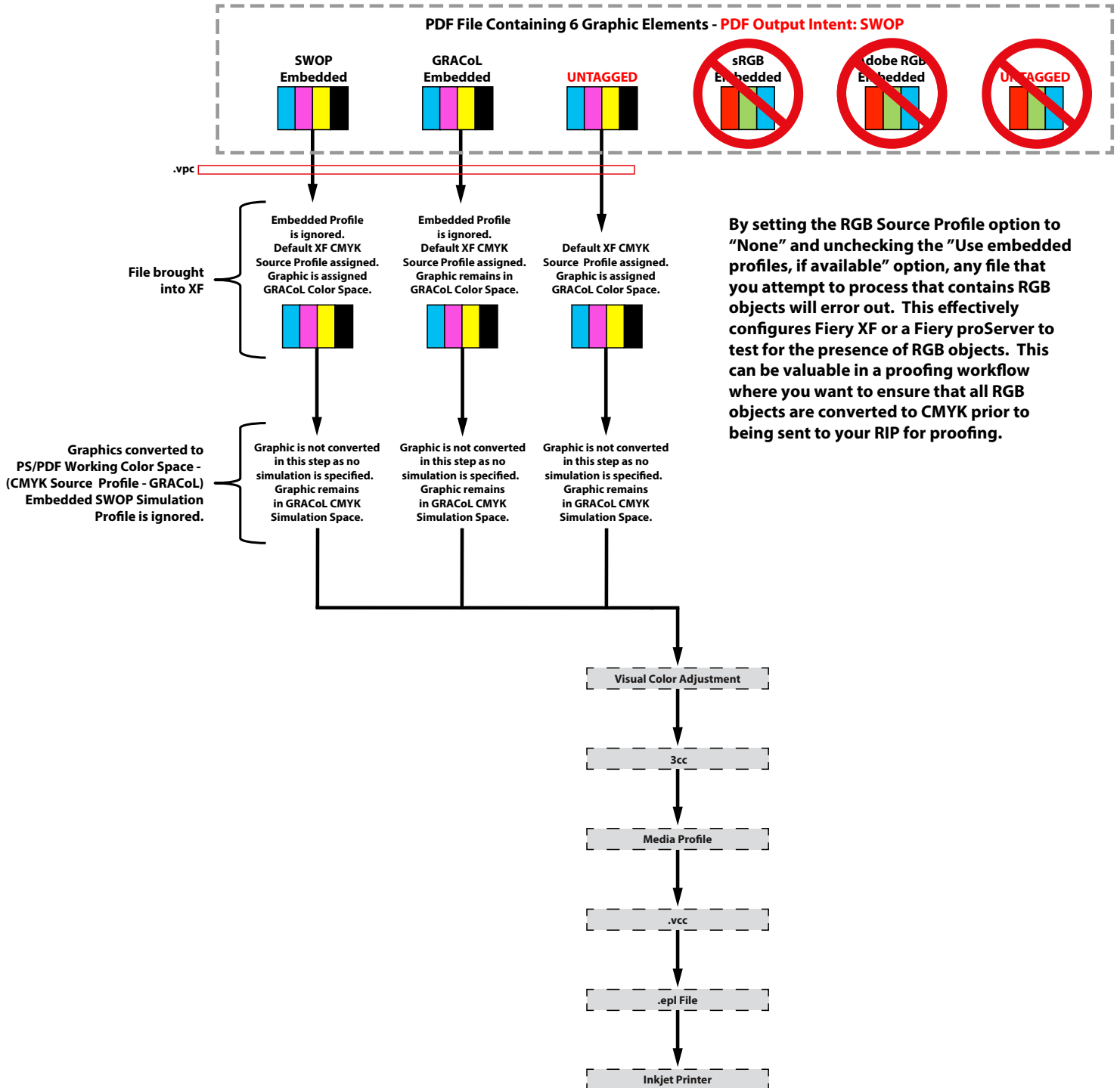
PDF File Processing Example #4

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **None**
 Use embedded profiles, if available: **Not Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK**
 PDF Print Engine: **Adobe PDF Print Engine**



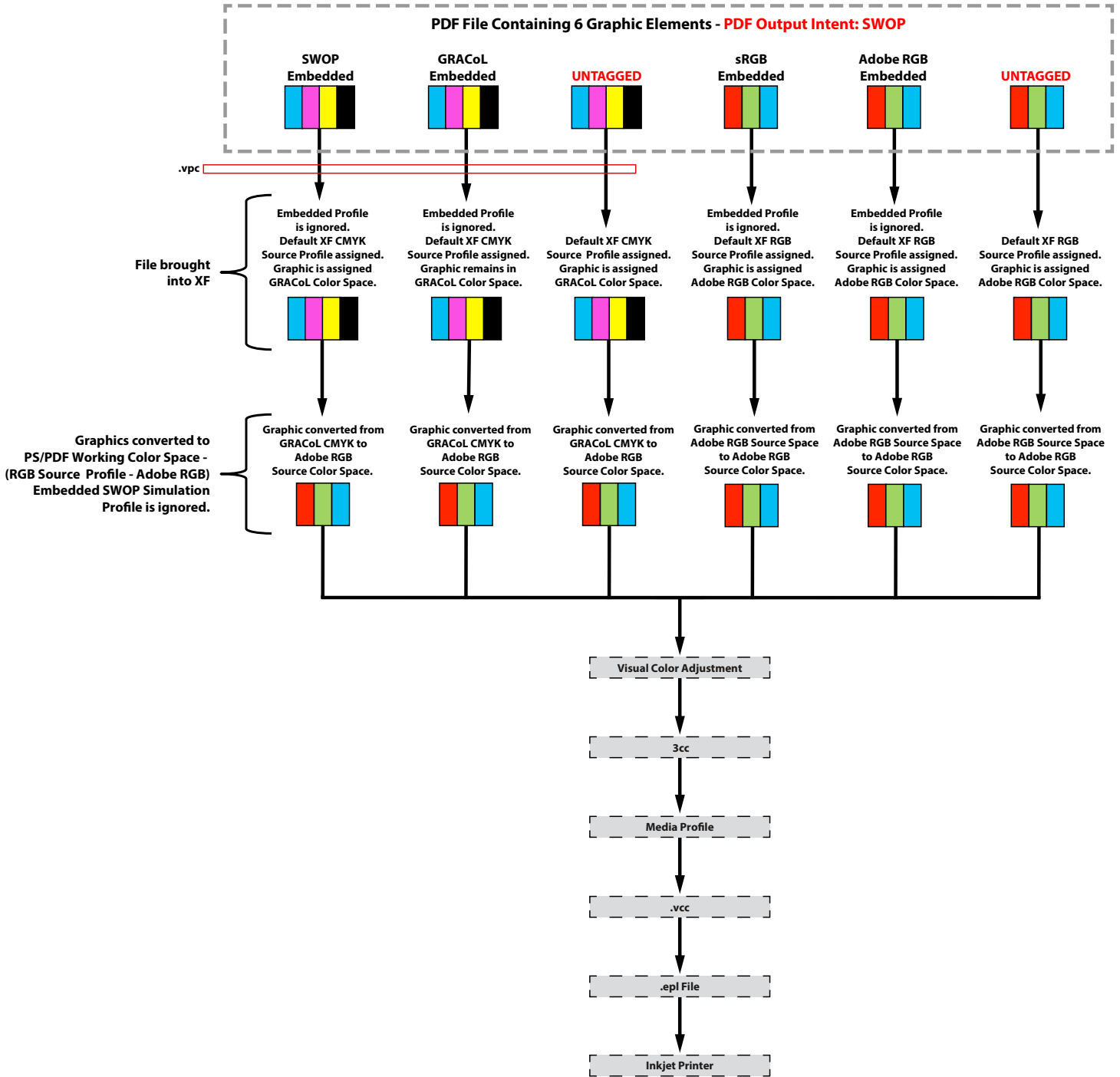
PDF File Processing Example #4b

RGB Source Profile: **None**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **None**
 Use embedded profiles, if available: **Not Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK**
 PDF Print Engine: **Adobe PDF Print Engine**



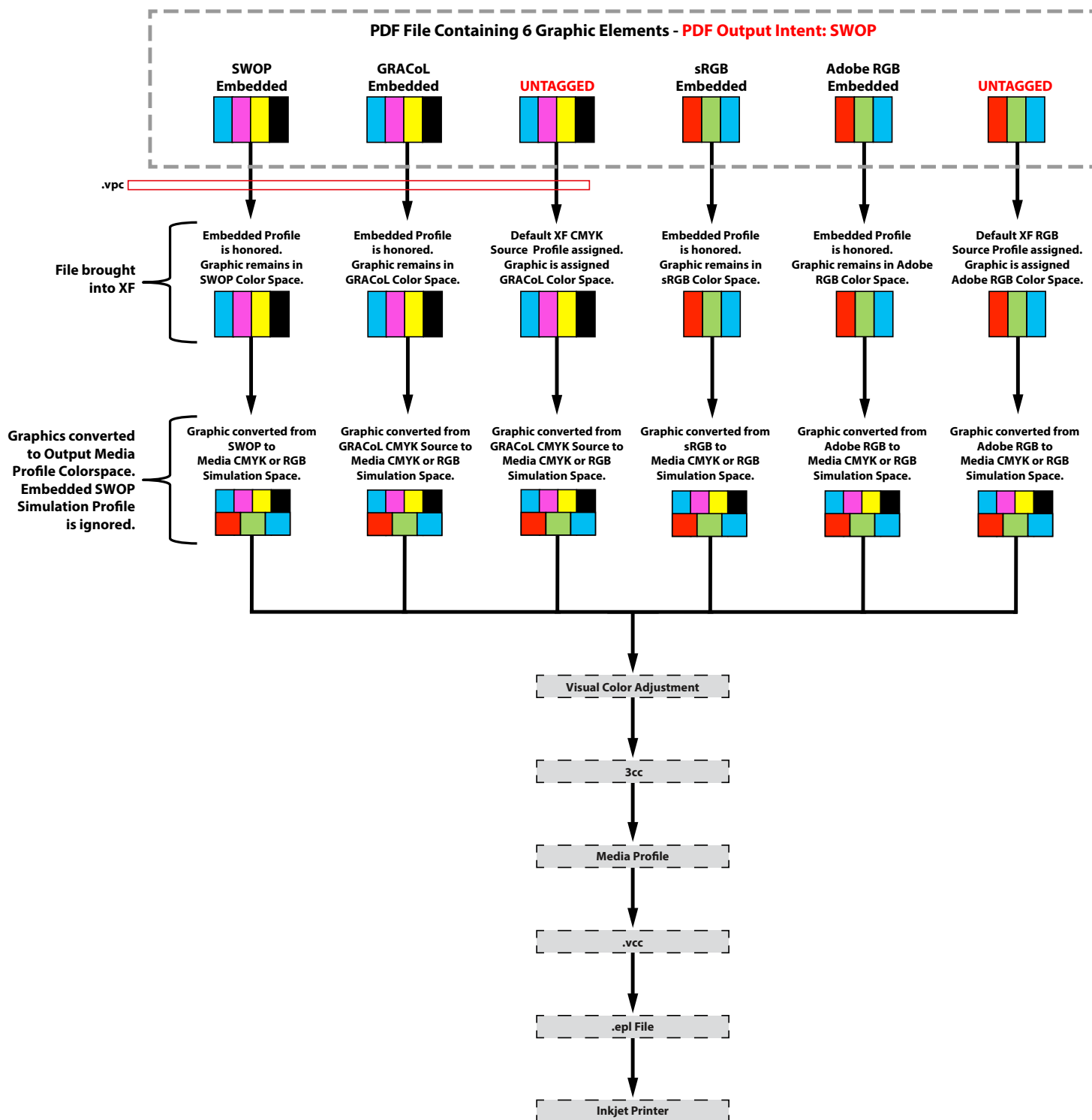
PDF File Processing Example #5

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **None**
 Use embedded profiles, if available: **Not Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **RGB**
 PDF Print Engine: **Adobe PDF Print Engine**



PDF File Processing Example #6

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **Use Media Profile**
 Use embedded profiles, if available: **Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK or RGB**
 PDF Print Engine: **Adobe PDF Print Engine**



PostScript File Processing Example #1

NOTE: Not applicable to Fiery proServer with FASTrip
(PDF file using CPSI or true PostScript file*)

RGB Source Profile: **Adobe RGB**

CMYK Source Profile: **GRACoL**

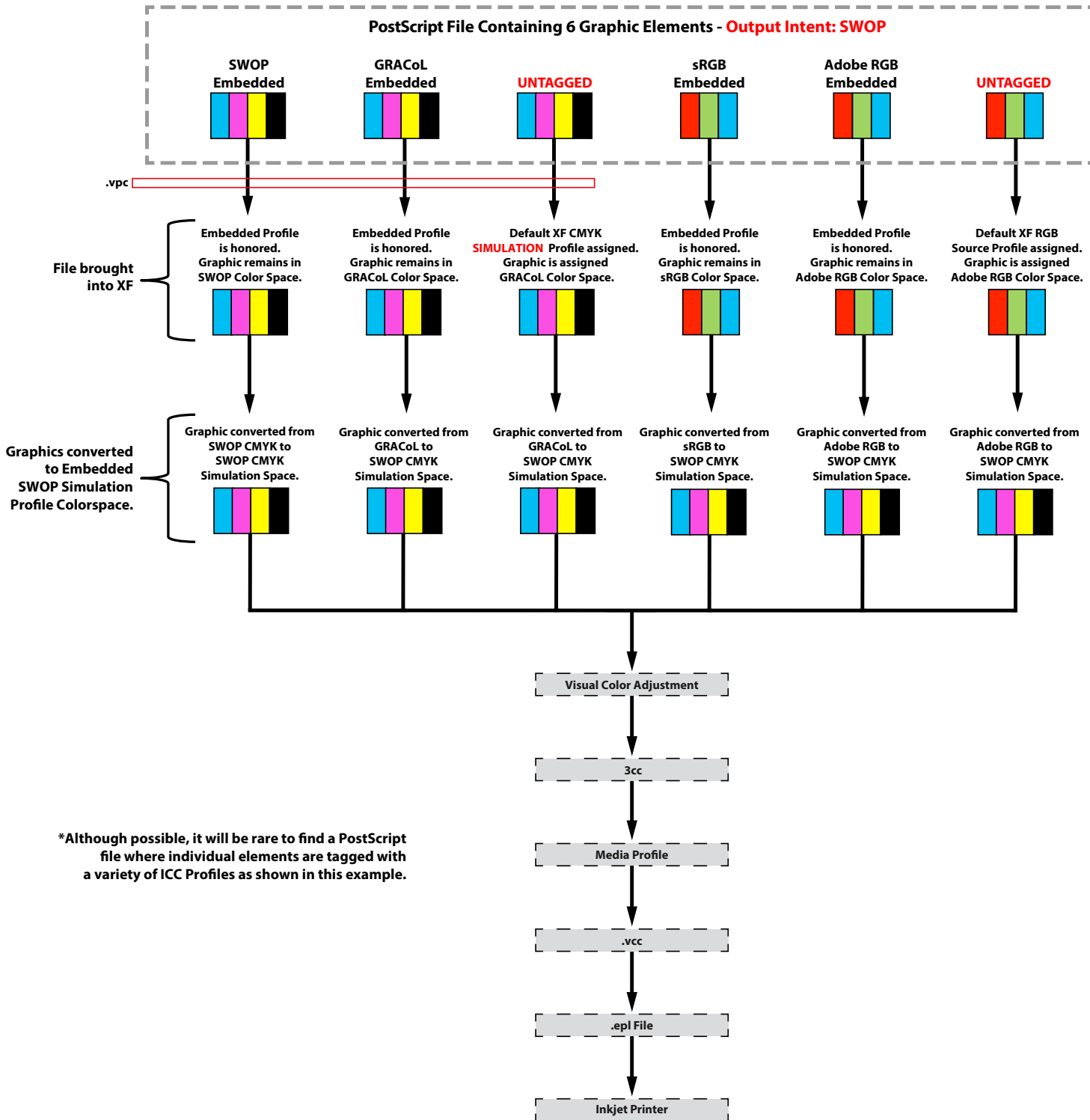
Simulation Profile: **GRACoL**

Use embedded profiles, if available: **Doesn't matter - Same results whether Checked or Unchecked**

Use PDF output intent, if available: **Checked**

PS/PDF Working Color Space: **CMYK**

PDF Print Engine: **Adobe PostScript 3 Engine**



PostScript File Processing Example #2

NOTE: Not applicable to Fiery proServer with FASTrip

(PDF file using CPSI or true PostScript file*)

RGB Source Profile: **Adobe RGB**

CMYK Source Profile: **GRACoL**

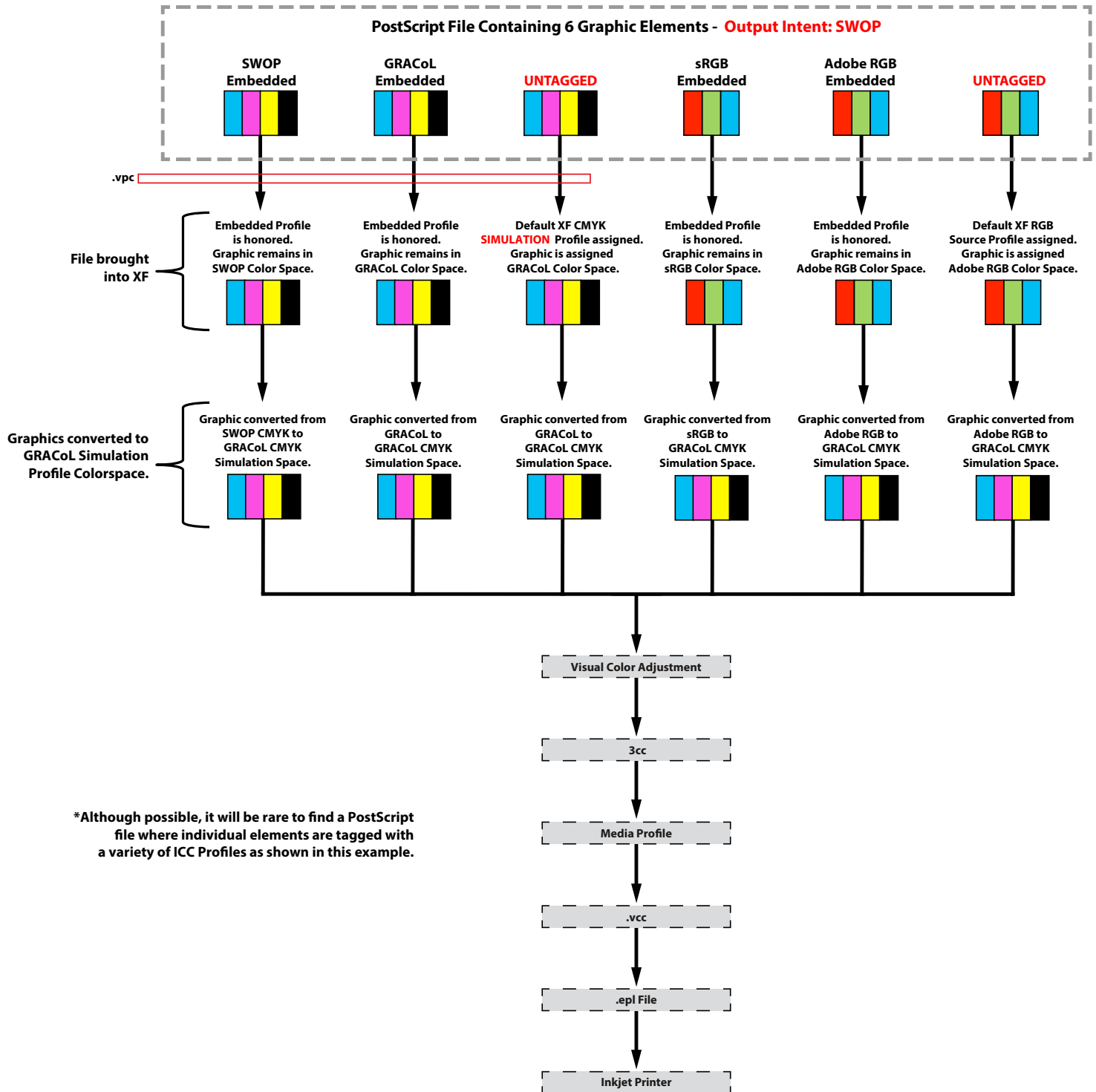
Simulation Profile: **GRACoL**

Use embedded profiles, if available: **Doesn't matter - Same results whether Checked or Unchecked**

Use PDF output intent, if available: **Unchecked**

PS/PDF Working Color Space: **CMYK**

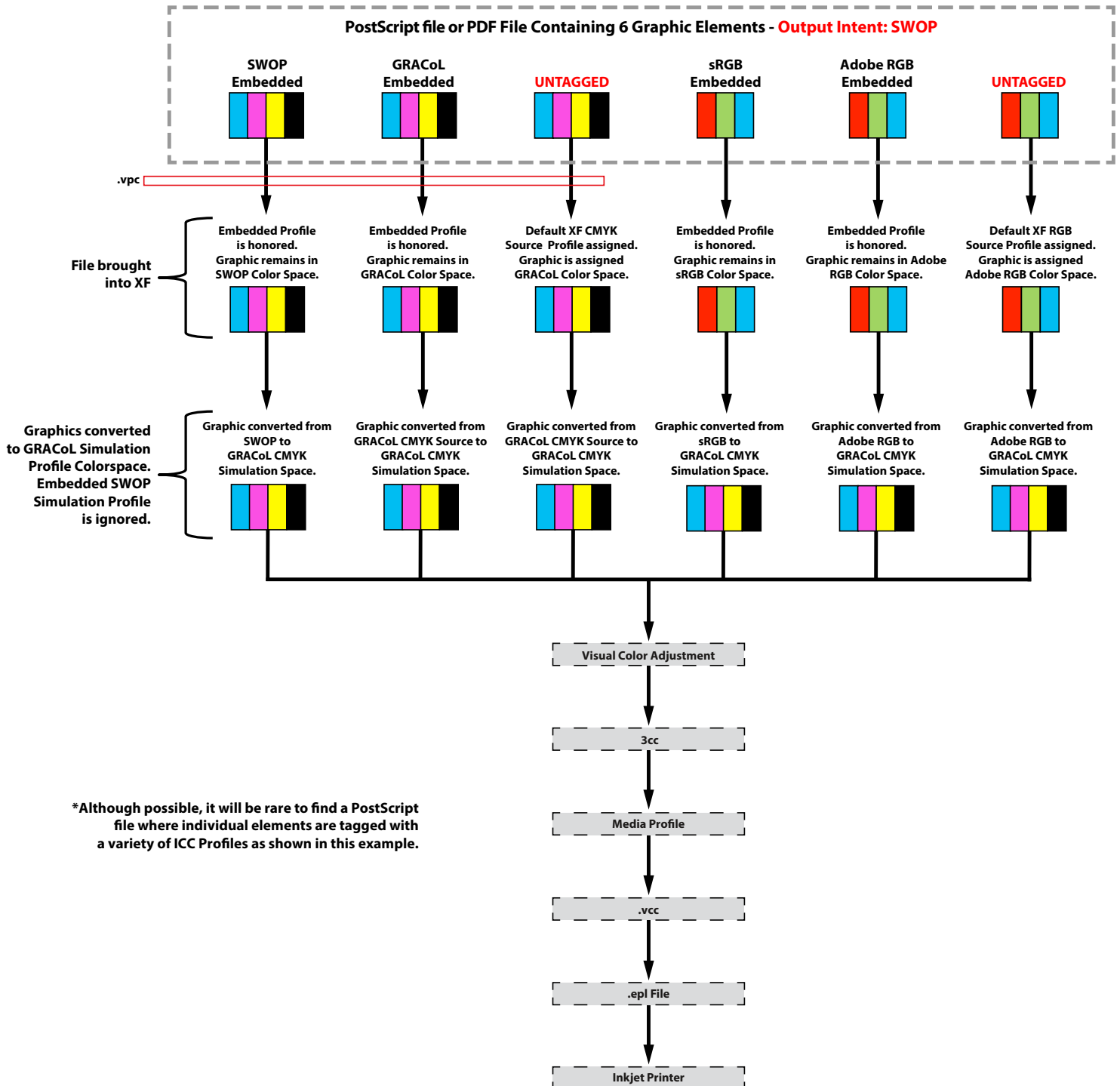
PDF Print Engine: **Adobe PostScript 3 Engine**



Fiery proServer with FASTrip PostScript File Processing Example #1

(PDF file using CPSI or true PostScript file*)

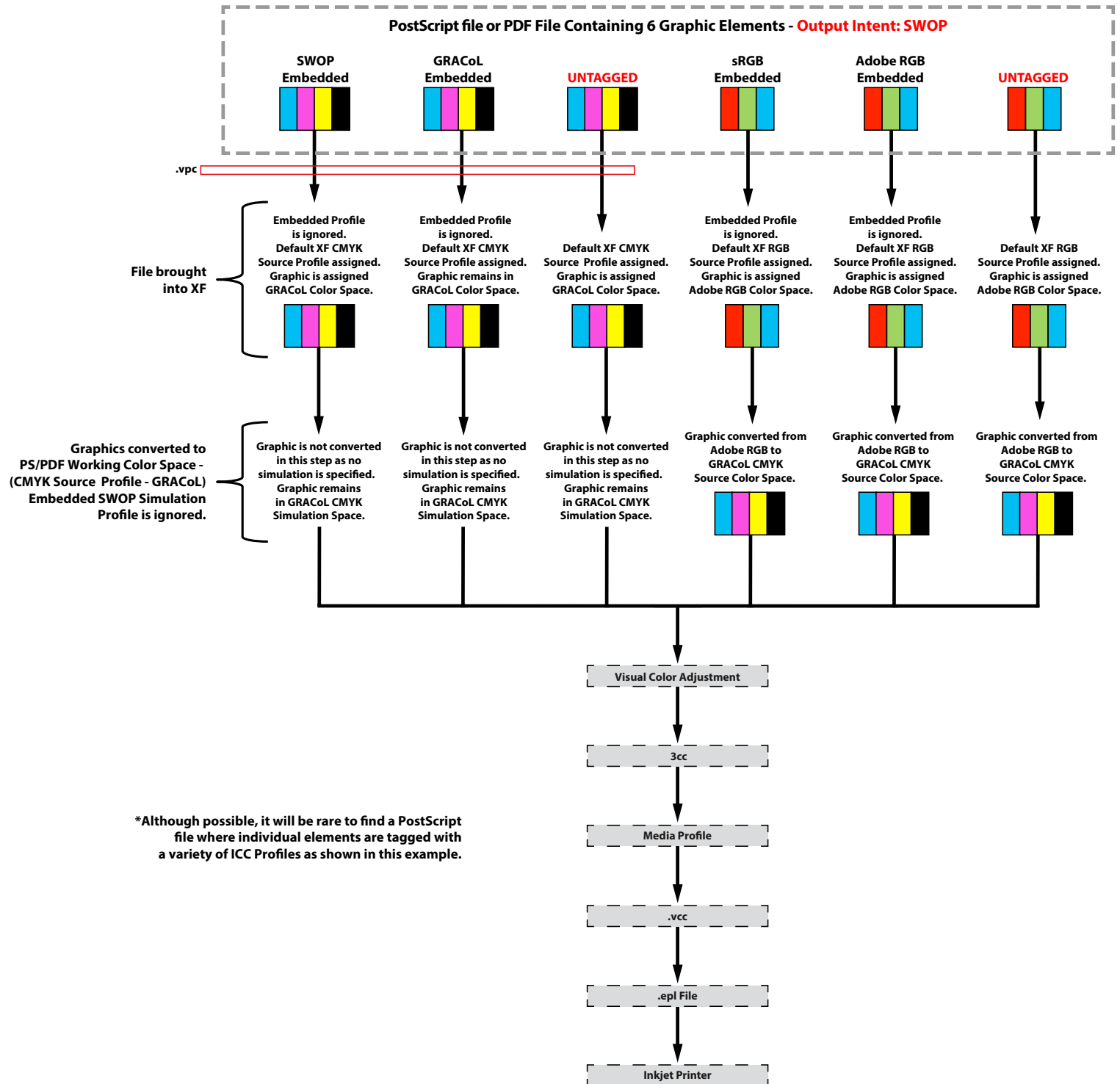
RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **GRACoL**
 Use embedded profiles, if available: **Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK**
 PDF Print Engine: **Adobe PostScript 3 Engine**



Fiery proServer with FAST RIP PostScript File Processing Example #2

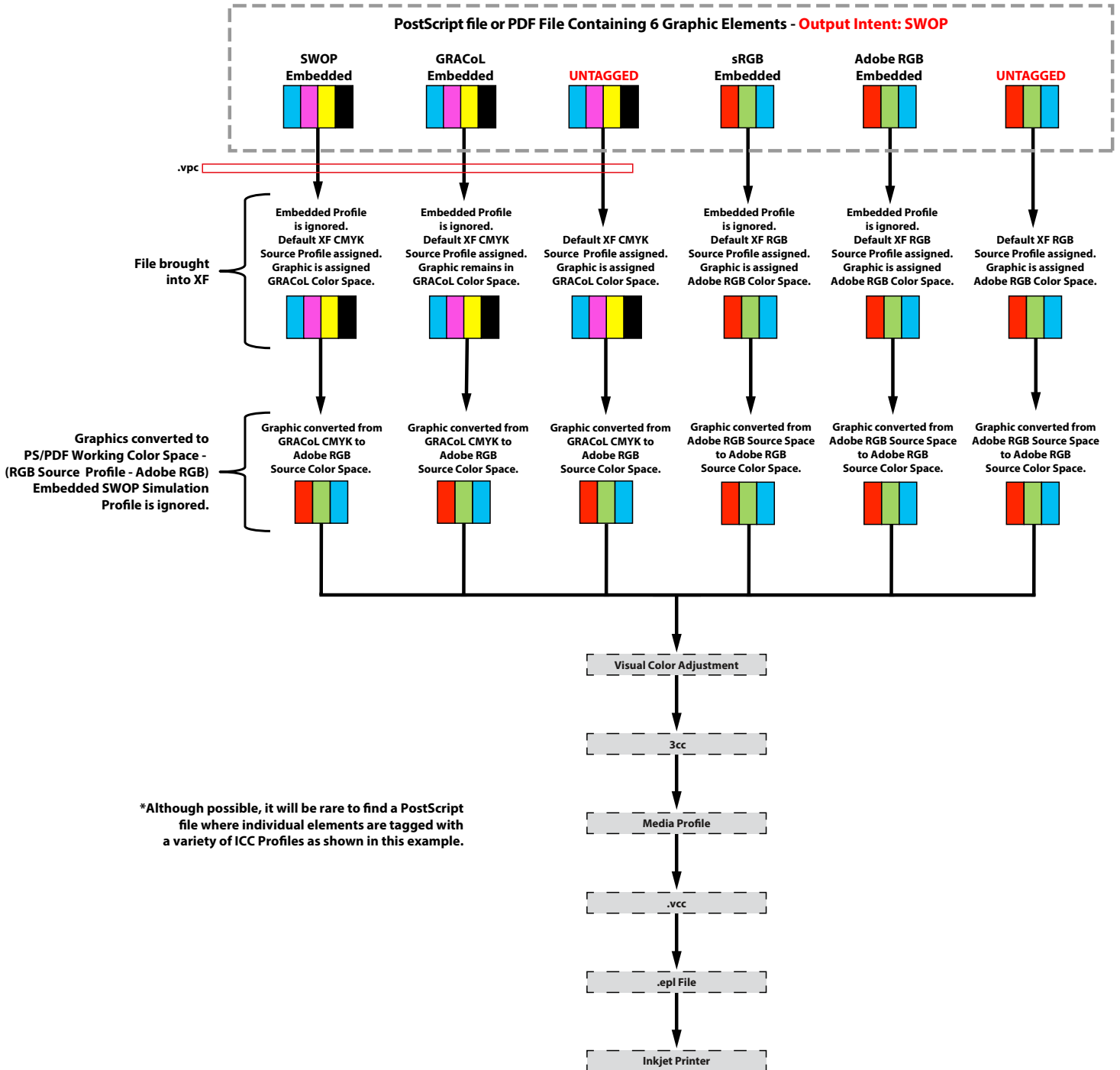
(PDF file using CPSI or true PostScript file*)

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **None**
 Use embedded profiles, if available: **Not Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK**
 PDF Print Engine: **Adobe PostScript 3 Engine**



Fiery proServer with FAST RIP PostScript File Processing Example #3 (PDF file using CPSI or true PostScript file*)

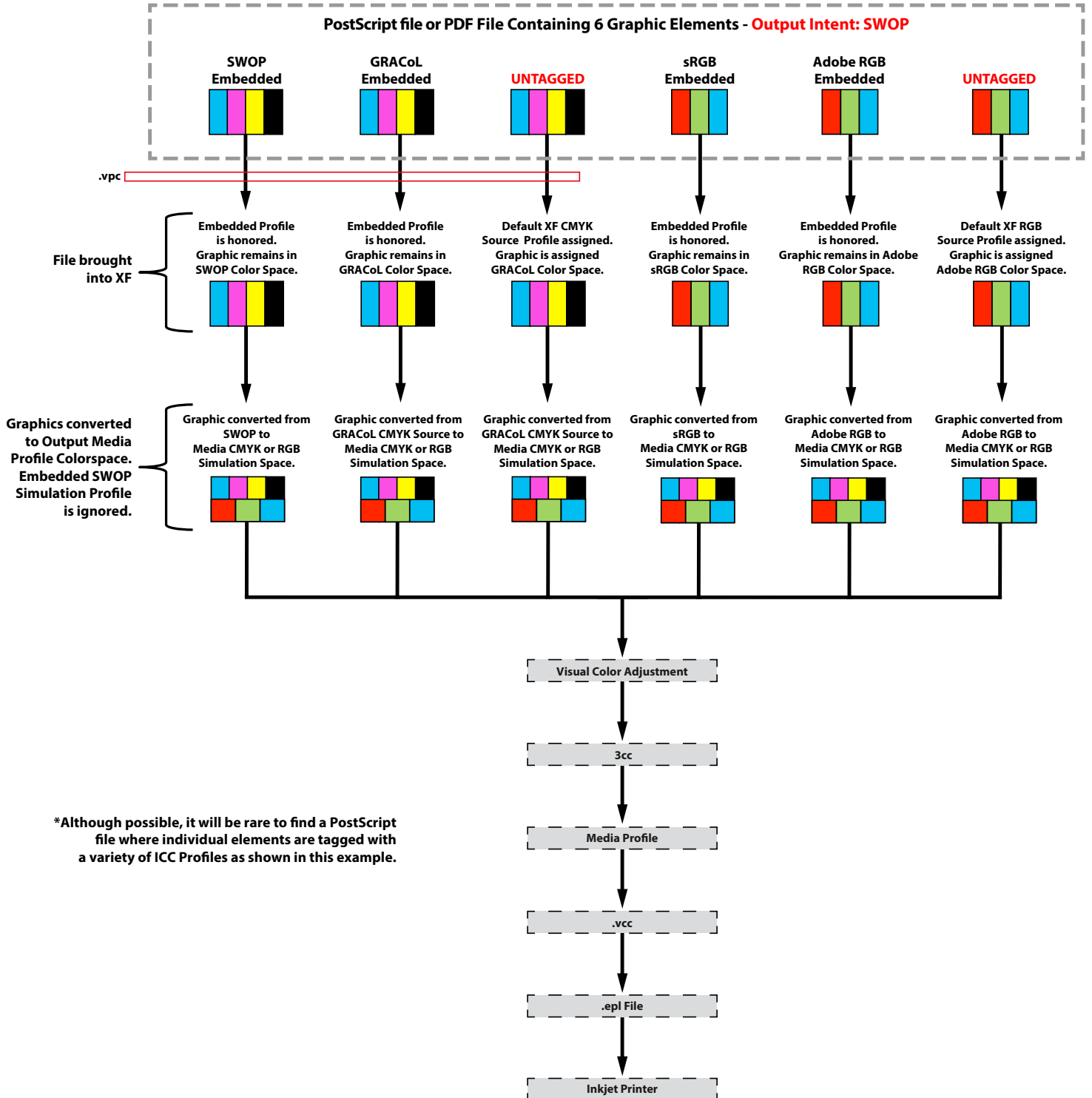
RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **None**
 Use embedded profiles, if available: **Not Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **RGB**
 PDF Print Engine: **Adobe PostScript 3 Engine**



Fiery proServer with FAST RIP PostScript File Processing Example #4

(PDF file using CPSI or true PostScript file*)

RGB Source Profile: **Adobe RGB**
 CMYK Source Profile: **GRACoL**
 Simulation Profile: **Use Media Profile**
 Use embedded profiles, if available: **Checked**
 Use PDF output intent, if available: **Not Checked**
 PS/PDF Working Color Space: **CMYK or RGB**
 PDF Print Engine: **Adobe PostScript 3 Engine**



Contone (Raster) File Processing Example #1

Each column below represents a single contone file (tiff, jpg, etc.)

RGB Source Profile: **Adobe RGB**

CMYK Source Profile: **GRACoL**

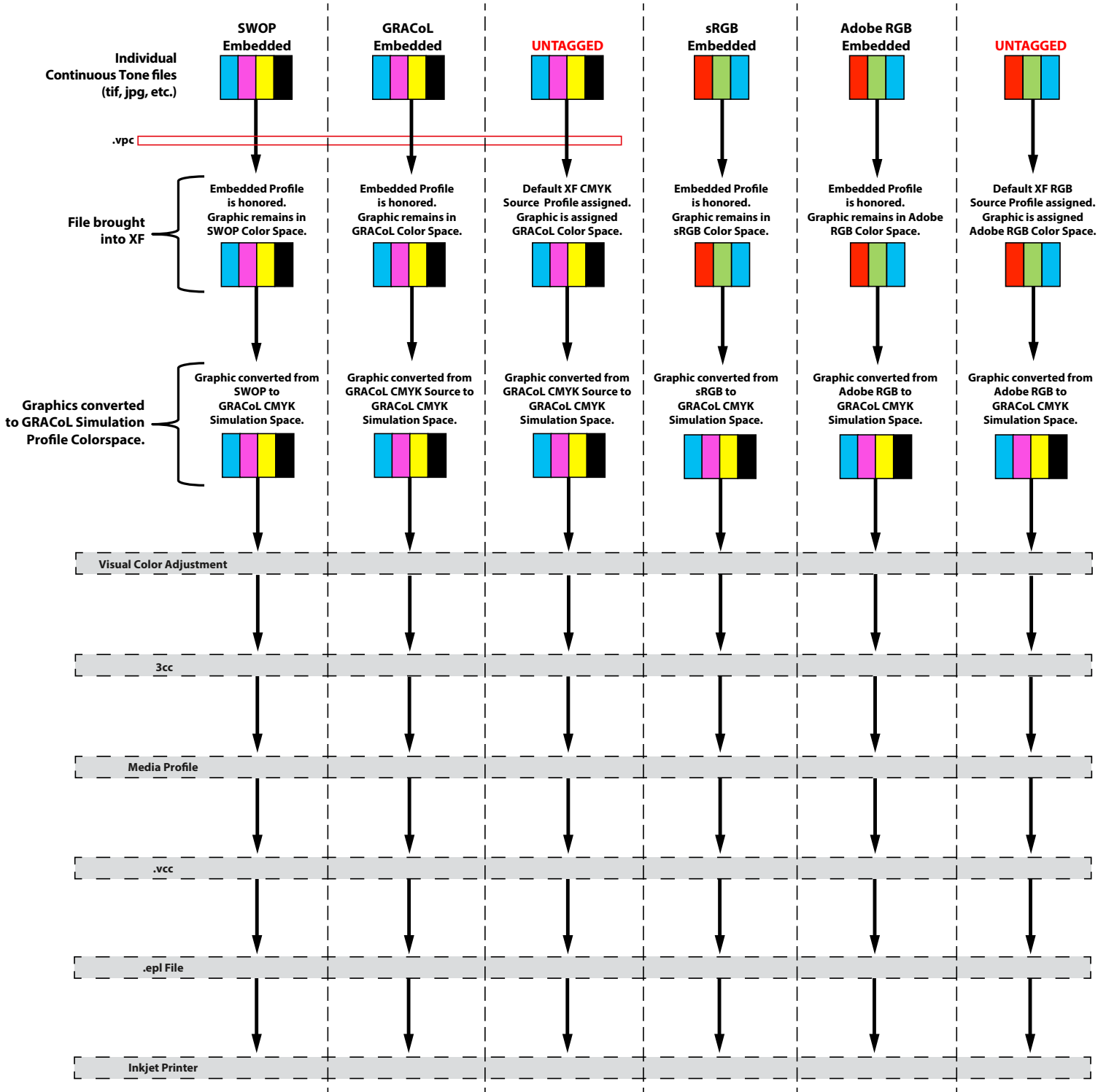
Simulation Profile: **GRACoL**

Use embedded profiles, if available: **Checked**

Use PDF output intent, if available: **This option has no impact on the processing of continuous tone files.**

PS/PDF Working Color Space: **This option has no impact on the processing of continuous tone files.**

PDF Print Engine: **This option has no impact on the processing of continuous tone files.**



Contone (Raster) File Processing Example #2

Each column below represents a single contone file (tiff, jpg, etc.)

RGB Source Profile: **Adobe RGB**

CMYK Source Profile: **GRACoL**

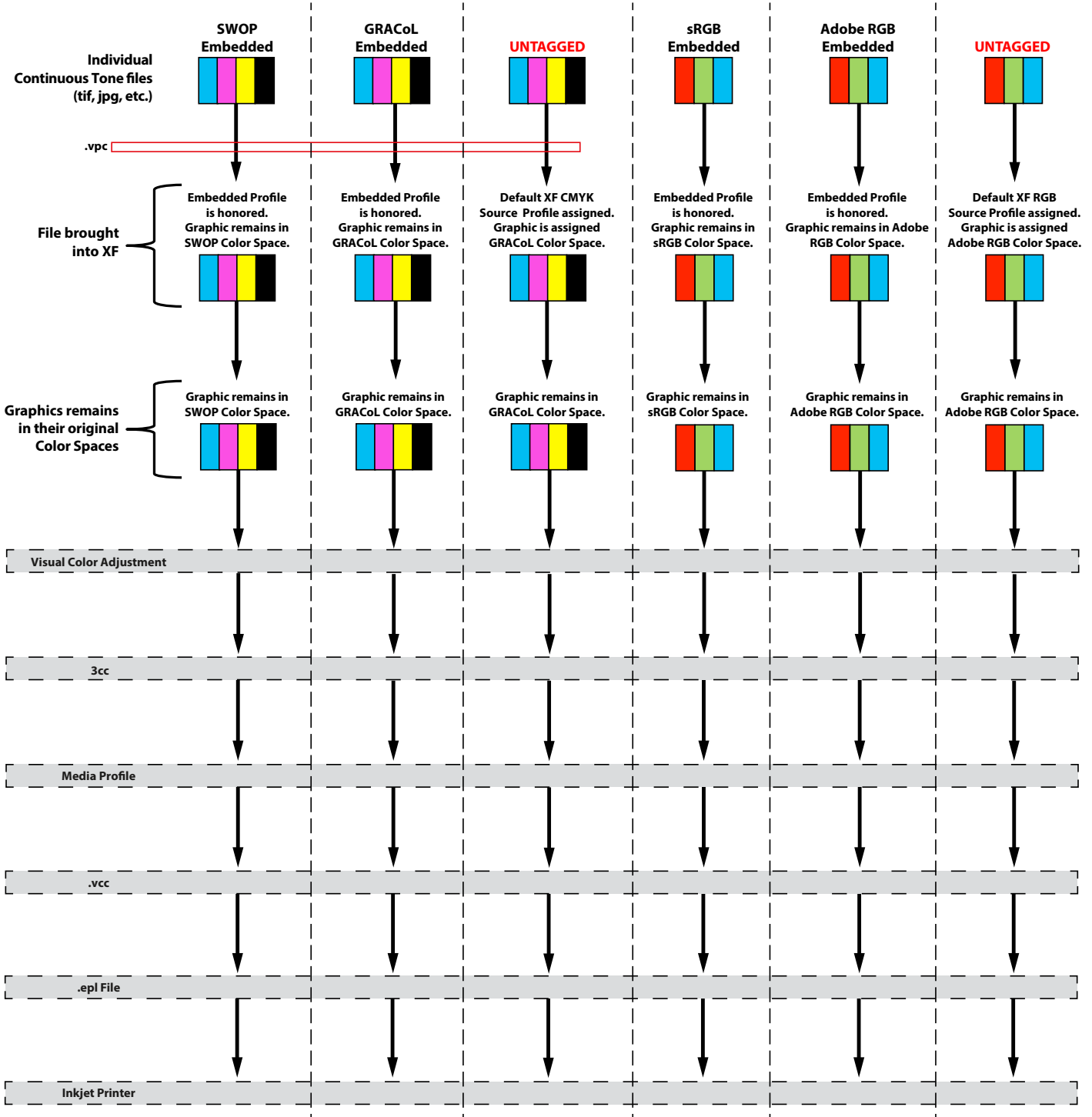
Simulation Profile: **None**

Use embedded profiles, if available: **Checked**

Use PDF output intent, if available: **This option has no impact on the processing of continuous tone files.**

PS/PDF Working Color Space: **This option has no impact on the processing of continuous tone files.**

PDF Print Engine: **This option has no impact on the processing of continuous tone files.**



Contone (Raster) File Processing Example #3

Each column below represents a single contone file (tiff, jpg, etc.)

RGB Source Profile: **Adobe RGB**

CMYK Source Profile: **GRACoL**

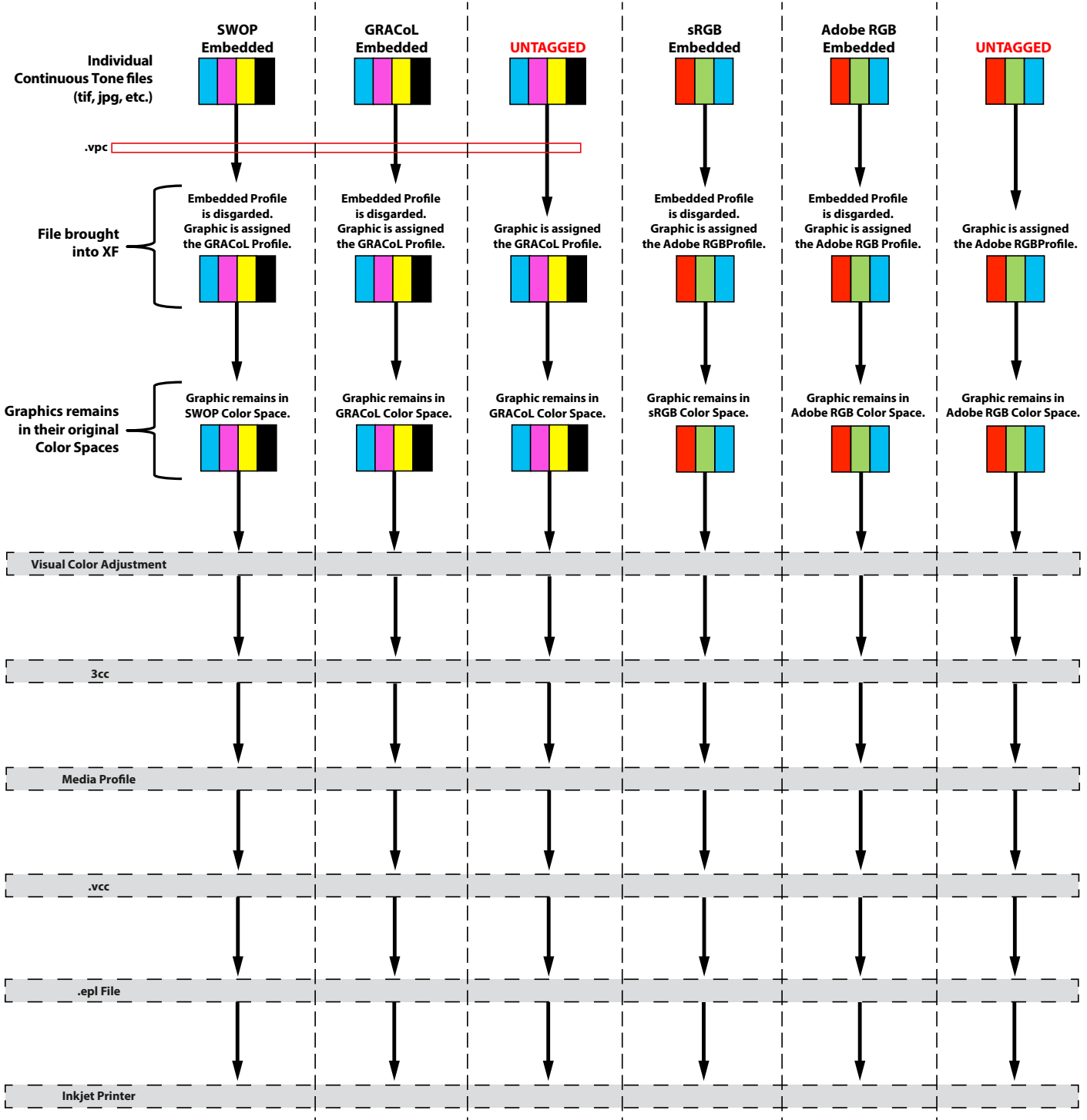
Simulation Profile: **None**

Use embedded profiles, if available: **Unchecked**

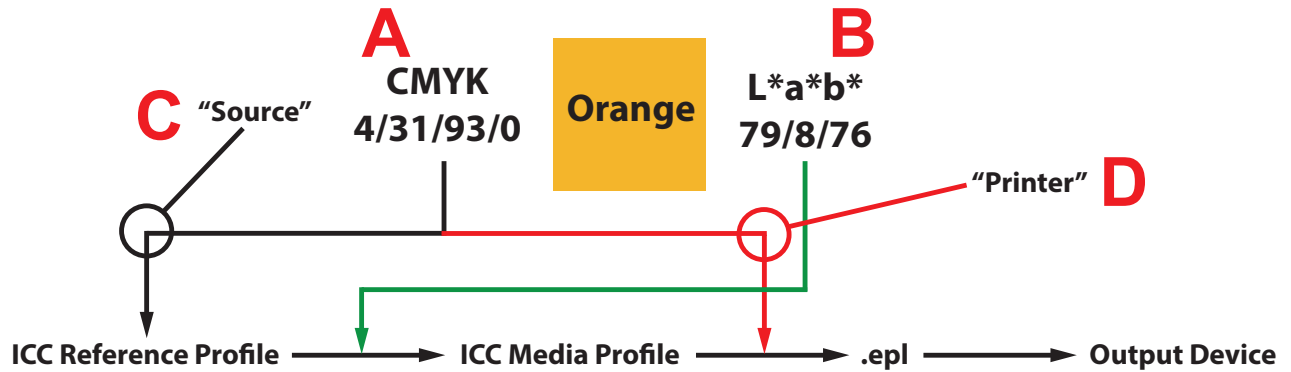
Use PDF output intent, if available: **This option has no impact on the processing of continuous tone files.**

PS/PDF Working Color Space: **This option has no impact on the processing of continuous tone files.**

PDF Print Engine: **This option has no impact on the processing of continuous tone files.**



Spot Color Handling in Fiery XF



Spot color definition at 100%

Independent Dependent

Source C Printer D

B CIE Lab

L: 79.00

a*: 8.00

b*: 76.00

Measure

A

C: 4

M: 31

Y: 93

K: 0.00

The Fiery XF Color Editor Application