Color Management

This tutorial demonstrates how use the color management settings of Asanti.
This tutorial makes use of Adobe Acrobat Pro X or later (win version).

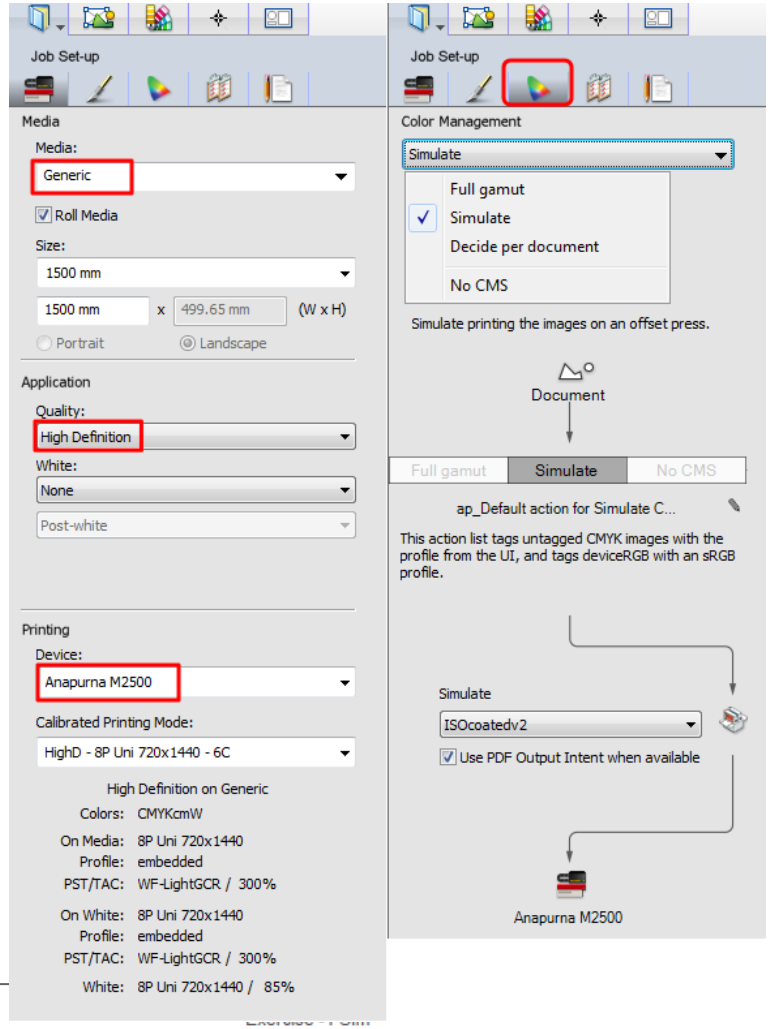
Sample files: \\[YOUR ASANTI SERVER]\Supportfiles\SampleFiles\Asanti
Also available on AsantiNetwork.

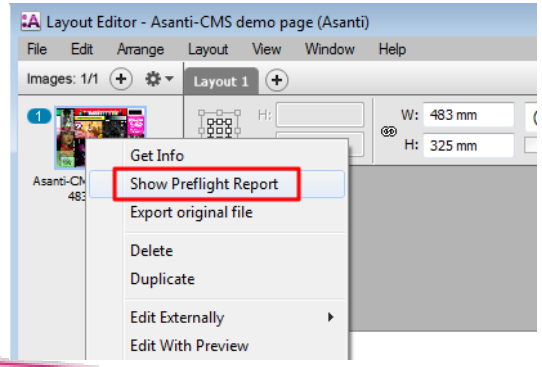
1. Simulate CMS mode

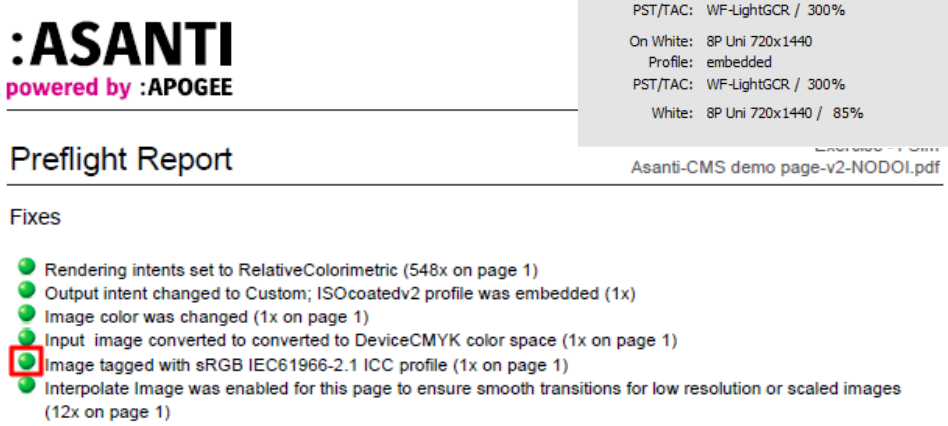
1. File menu > New layout job.
2. Select the Job Set-up Inspector panel and select Generic media, a real physical Engine (Anapurna or Jeti, not a GenericSD) and as Quality "High Definition".
3. Click on the CMS panel (color gamut icon): 
4. Enable the "Simulate" color management mode.

All images will now be converted from input to the simulation profile (by default ISOcoatedv2) and consecutively towards the digital press profile (from the CPM)

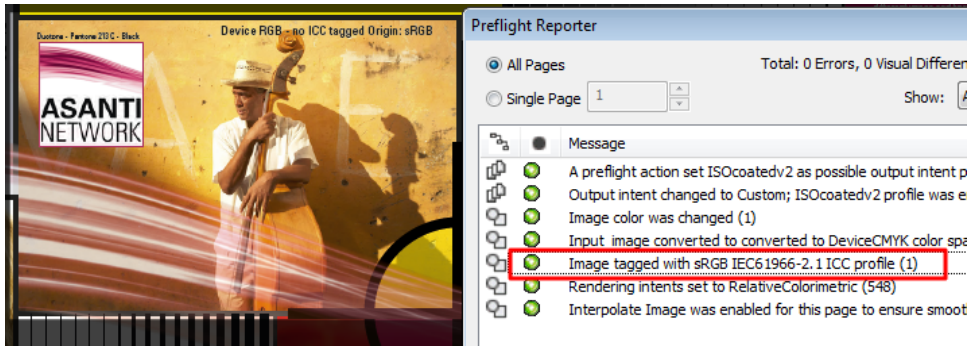
5. In the images panel click "+" and browse for "Asanti-CMS demo page.pdf", and drag the file to the print layout.
6. Consult the Preflight Report, by context clicking on the image thumbnail. In the preflight report you can verify which profiles were tagged to images during preflighting.







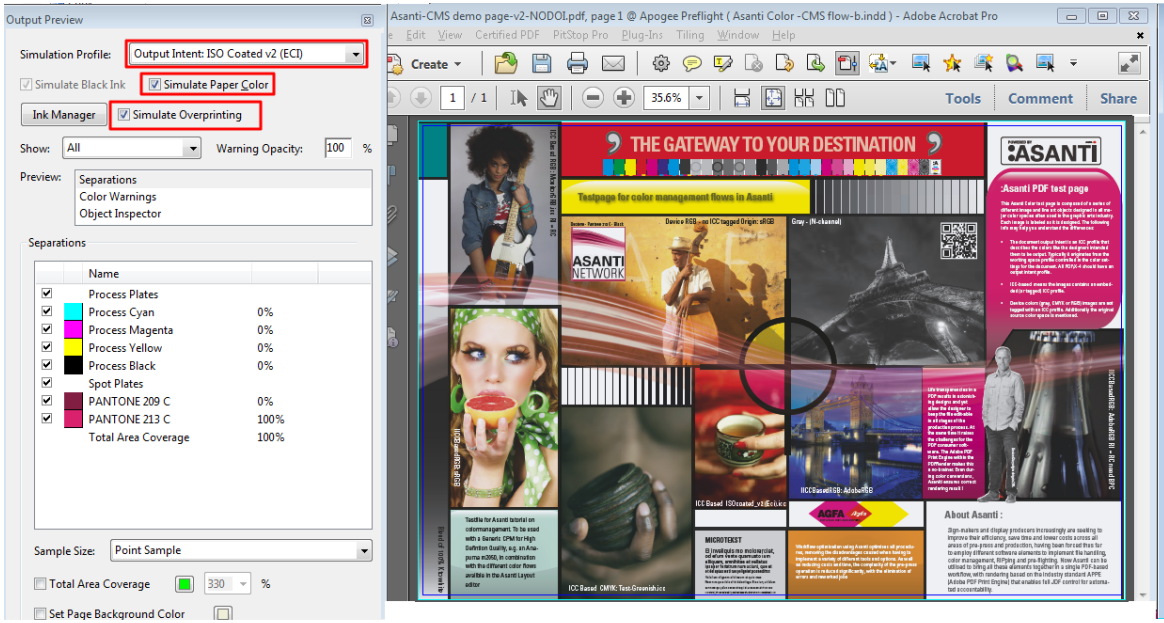
Click on the green bullet to see which object is affected by the Preflight action.

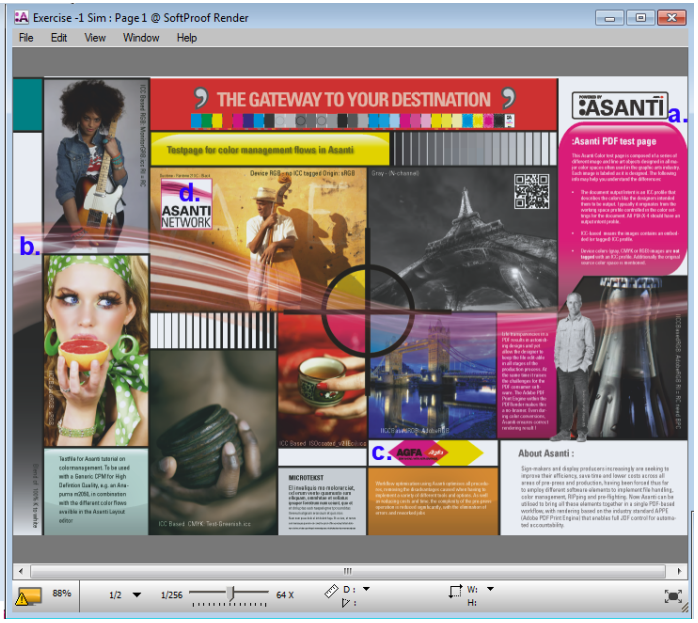


7. Close the "preflight reporter plugin" and enable "Output Preview" from the "print production" tools.
8. In the Asanti Layout editor, double-click on the thumbnail in the Image Panel. The color managed preview will open.
9. Compare it to the Acrobat result.

   The color differences between the input document and Asanti color managed preview, are caused by difference in color gamut of the simulation profile (ISOcoatedv2) and the digital press profile.

   Spot colors (a.) , transparencies (b.) , overprint objects (c.) , duotones (d.) etc., are all correctly rendered.



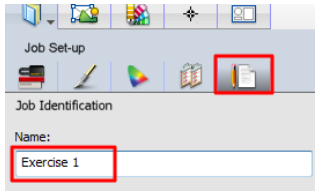


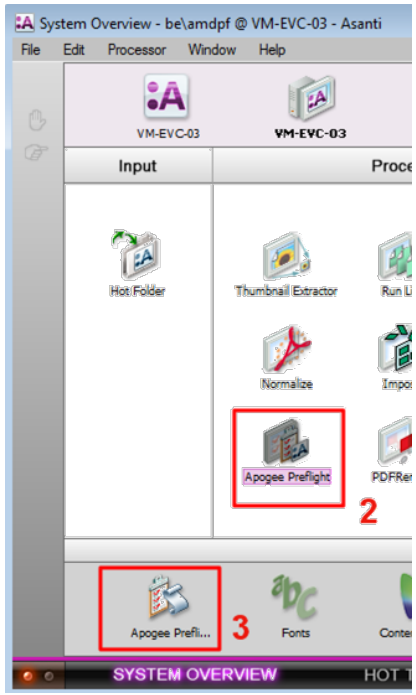
Acrobat Pro with "Output Preview" simulating ISOcoatedv2 **Asanti color managed preview with simulation CMS**

10. Close the Acrobat result and Asanti color managed preview.

11. Change the name of the job to "Exercise 1" Job Set-up > Job Identification of the inspector and submit the job, use "Make and Hold" and ignore any warnings.

The Simulation flow is the advised CMS mode for complex PDF's with transparencies and overprint, it ensures identical rendering compared to Acrobat Pro with Output Preview enabled.

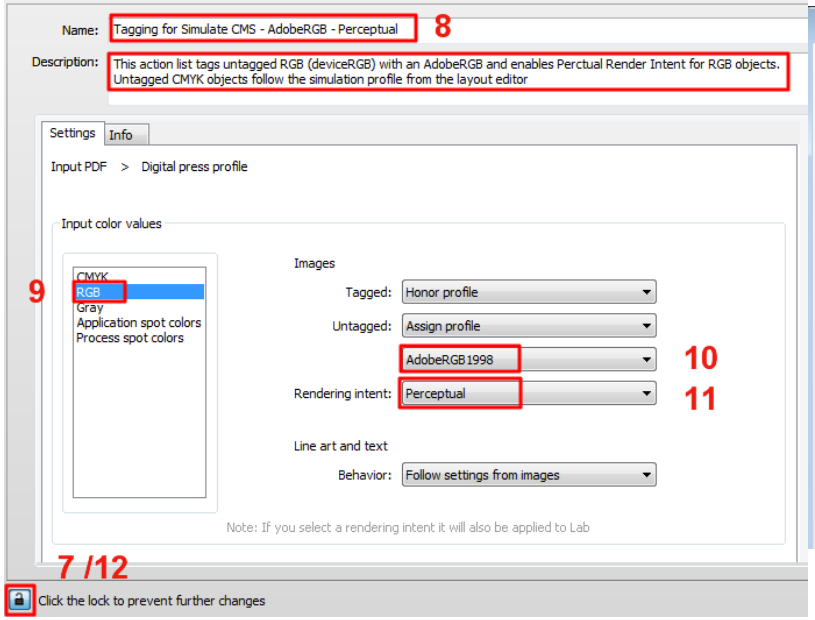


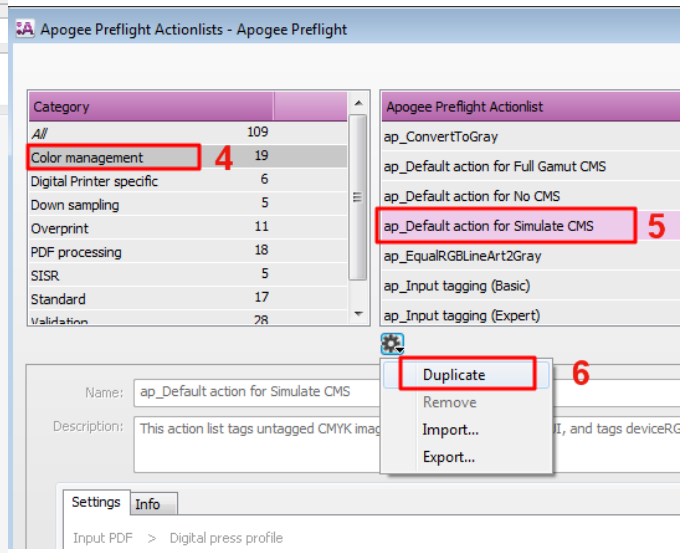


2. Using alternative profile tagging and Rendering Intents

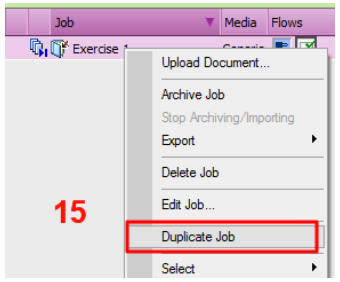
1. In the Asanti client click on the system overview window.
2. In the "process" pane, click on the "Apogee Preflight" Icon.
3. Double-click on the Apogee Preflight action list resource category, at the bottom of the window.
4. Click on the color management category.
5. Select the "ap_Default action for Simulate CMS".
6. Use the cogwheel to duplicate the action list.
7. Unlock the actionlist parameters by clicking on the padlock icon (lower left corner).
8. Change the name and description of the action list to something meaningful.

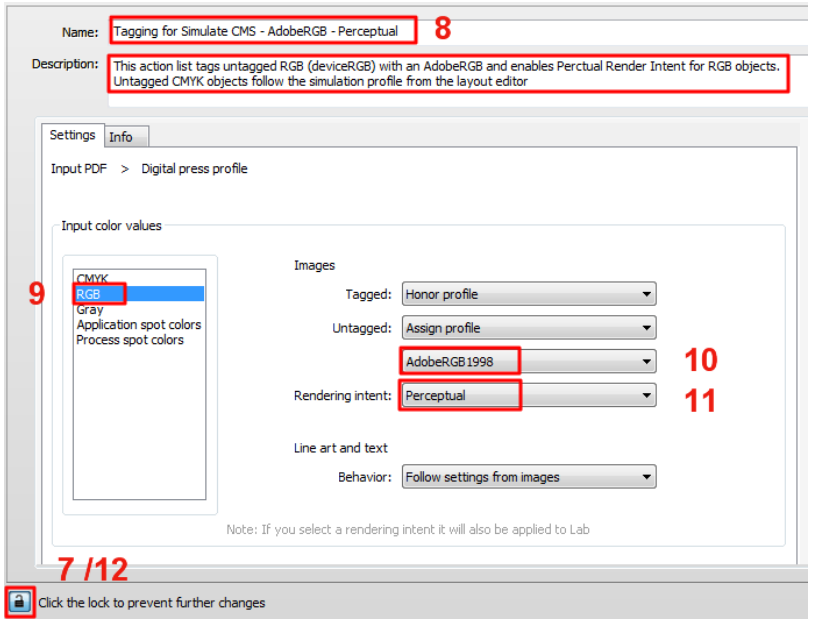
The name and the description of the actionlist are displayed in the Asanti layout editor (see step 17).

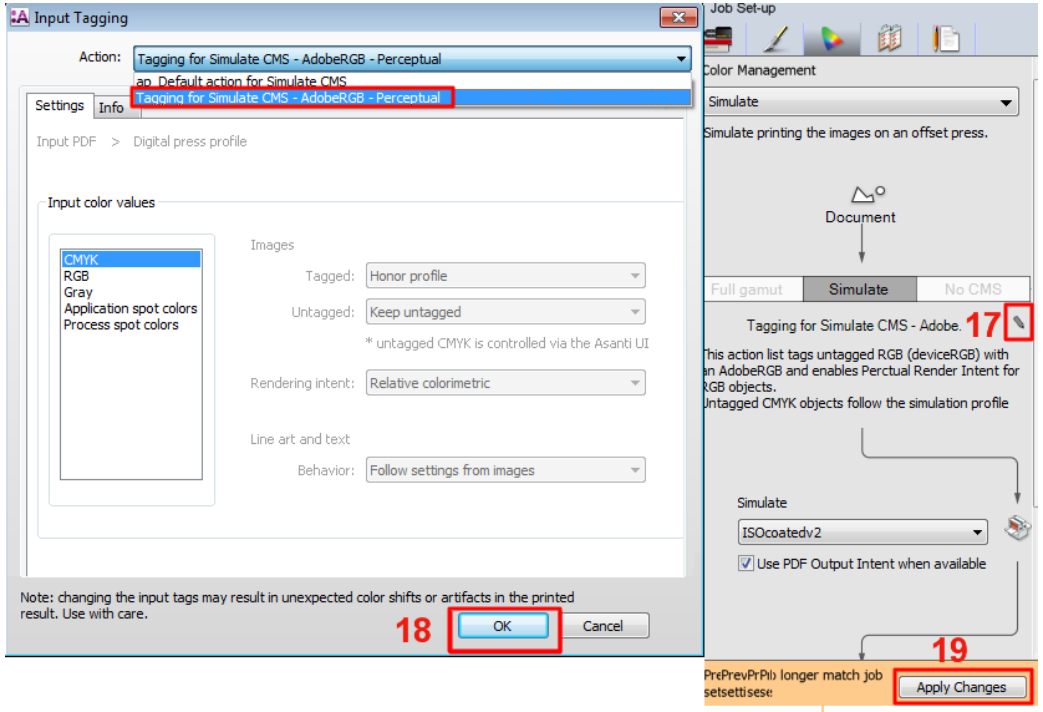


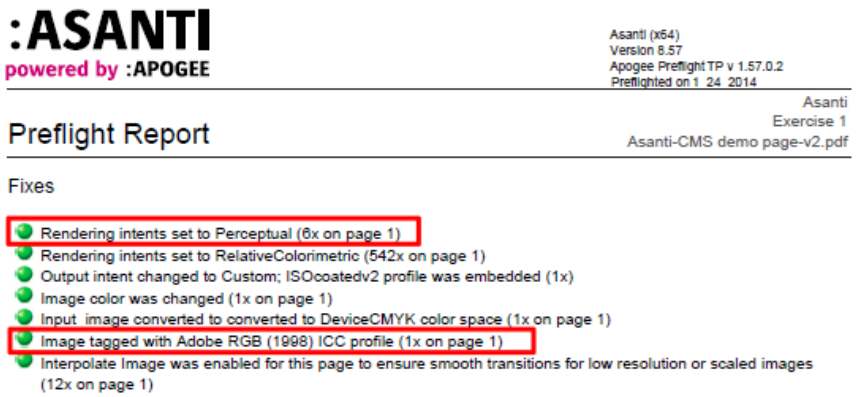


9. Click on the RGB color category.
10. Select "AdobeRGB 1998" for untagged RGB objects.
11. Select "Perceptual" for Rendering Intent.
12. Lock the action list again with the padlock to save the settings.
13. Close the Apogee Preflight Action List dialog.
14. Go back to the Asanti Jobs window.
15. Context-click on the previously created job "Exercise 1" and select "Duplicate Job" from the list. The new job will be opened immediately in Asanti Layout editor. Change the name of the job to "Exercise 2"
16. Select the color management inspector panel
17. Click on the crayon icon to activate the newly created input tagging action list.
18. Click OK.
19. Click the"Apply Changes" button, the job will now be preflighted again with the new action list. Wait until the green background (lower right corner) turns white again, indicating that the preview is up-to-date again. (this may take a while).
20. Open the Preflight report again, and verify that the RGB images are now tagged with the AdobeRGB profile and that the Rendering Intent is set to Perceptual.








:ASANTI
powered by :APOGEE

Asanti (x64)
Version 8.57
Apogee Preflight TP v 1.57.0.2
Preflighted on 1 24 2014

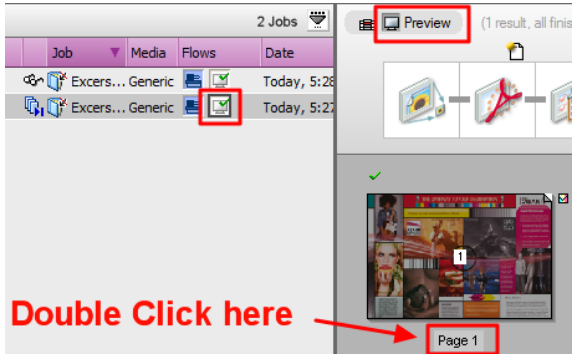
Preflight Report

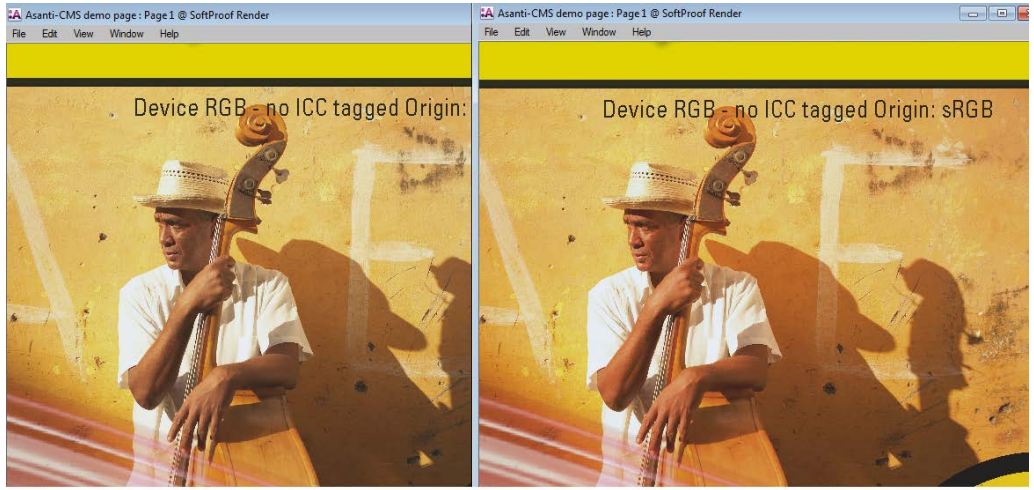
Asanti
Exercise 1
Asanti-CMS demo page-v2.pdf

Fixes

- Rendering intents set to Perceptual (6x on page 1)
- Rendering intents set to RelativeColorimetric (542x on page 1)
- Output intent changed to Custom; ISOcoatedv2 profile was embedded (1x)
- Image color was changed (1x on page 1)
- Input image converted to converted to DeviceCMYK color space (1x on page 1)
- Image tagged with Adobe RGB (1998) ICC profile (1x on page 1)
- Interpolate Image was enabled for this page to ensure smooth transitions for low resolution or scaled images (12x on page 1)

21. Open the Asanti color managed preview, and compare the result of exercise 1 with the result of exercise 2. The result of Exercise 1 can be re-opened through the Jobs List pane, by double-clicking on the page 1 label in the results tab of the Preview flow). The difference is very obvious on the Cuban bass player image.



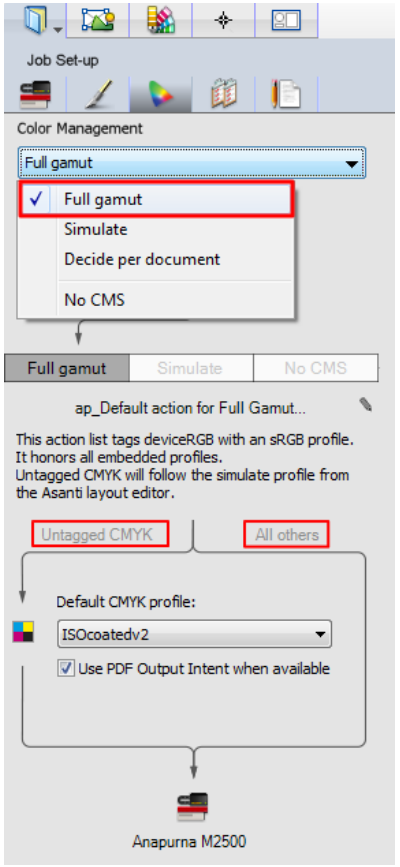


sRGB - Relative Colorimetric **AdobeRGB - Perceptual**

22. Submit the job, select "Make and Hold" and ignore any warnings.

3. Full Gamut Printing

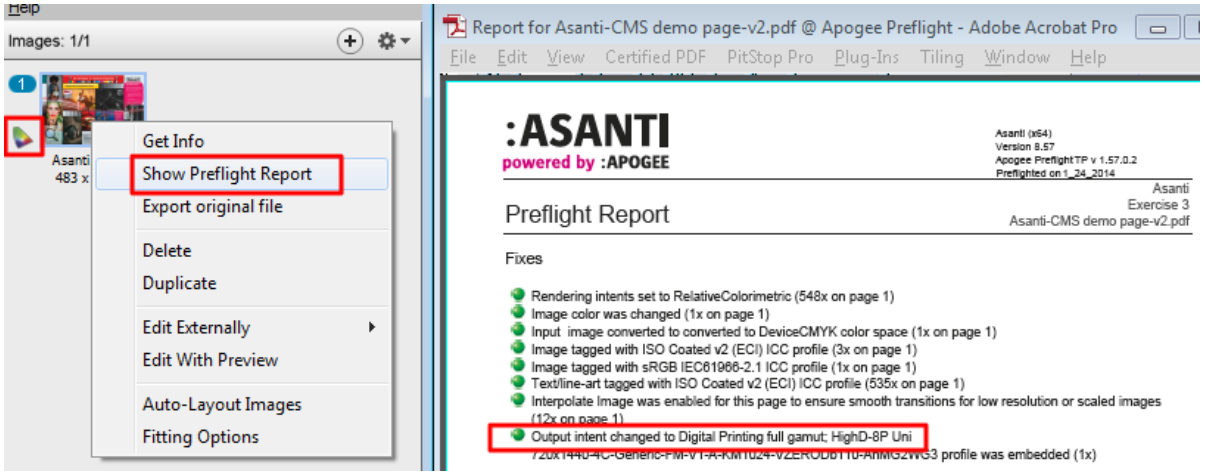
1. In the Jobs window, context-click on the job "Exercise 1" and select "Duplicate Job" from the list. The new job will be opened immediately in Asanti Layout editor. Change the name of the job to "Exercise 3".
2. Select the color management panel from the Job Set-up inspector.
3. Enable the "Full Gamut" color management mode.

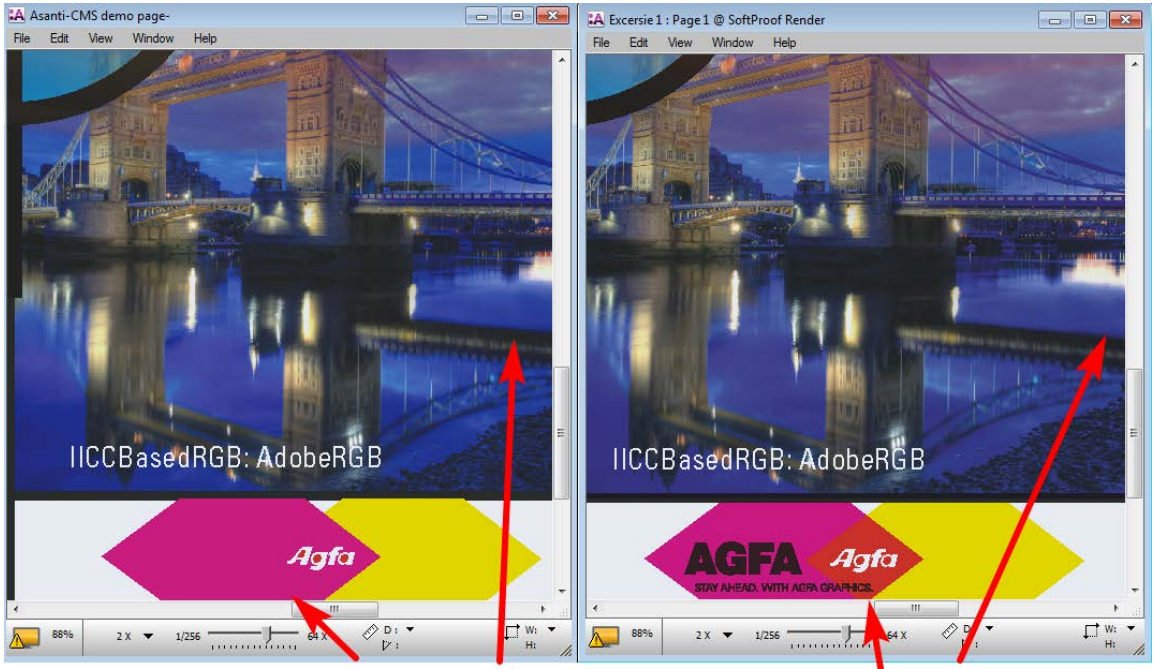


Untagged CMYK images will be simulated as the "Default CMYK profile" (default setting = ISOCoatedv2), all other color spaces will be converted directly to the digital press profile (from the CPM).

4. Click the "Apply Changes" button, the job will now be preflighted for the full gamut mode. Wait until the green background (lower right corner) turns white again, indicating that the preview is up-to-date. (this may take a while).
5. Notice the little color gamut Icon left of the image thumbnail, this indicates that the image will use the full gamut CMS mode.
6. Consult the Preflight Report, by context clicking on the image thumbnail.
   In the preflight report you can verify which profiles were tagged during preflighting.
   Notice that the output Intent was changed to "Digital Printing full gamut"
7. Close the preflight report and double-click on the image thumbnail to open the color managed preview.
8. Zoom towards the Agfa logo and the "Blue London Bridge "image and notice that the overprint effect which was originally in the PDF has disappeared. The blues of RGB images are indeed a bit more saturated compared to the simulate mode.

Full Gamut CMS mode can break overprint effects in PDF's! This is because this mode requires tagging of CMYK objects which is incompatible with overprint attributes. Similarly also transparency effects can change due to the tagging of CMYK objects within a PDF.
Therefor the Full Gamut mode is only advised for single RGB image file formats (Tiff, JPG, ...)

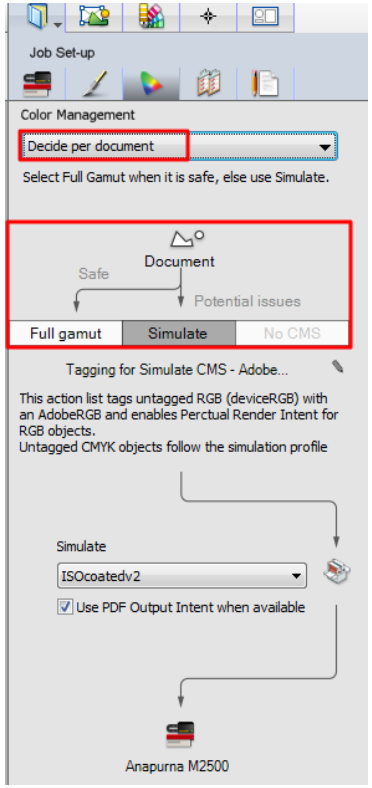




9. Submit the job, select ″Make and Hold″.

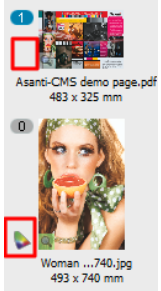
4. ″Decide per document″ color management mode

1. In the Jobs list Context-click on the job ″Exercise 1″ and select ″Duplicate Job″ from the list. The new job will be opened immediately in Asanti Layout editor. Change the name of the job to ″Exercise 4″.
2. Select the Job Set-up > Color Management inspector.
3. Enable the ″Decide per document″ color management mode.



In this mode Asanti uses full gamut printing when it's safe to do so, and switches back to simulation printing when it's not safe.

4. Because 2 CMS modes may be used, the input tagging options for both modes are manageable. Click on the "Full gamut" tab as well as on the simulate tab, to verify the input tagging settings for both CMS modes.
5. Click the ″Apply Changes″ button, the job will now be checked on the occurrence of overprint objects, complex transparency objects and other complex graphic constructions that require the simulate CMS mode. (this may take a while).
6. Notice that the little color gamut Icon left of the image thumbnail has disappeared, this indicates that the full gamut CMS mode will not be used for the pdf file.
7. In the images pane click "+" and browse for "Woman with grapefruit 493x740.jpg".
8. Notice the little color gamut Icon left of the image thumbnail, indicating that this image can safely be use the full gamut CMS mode.

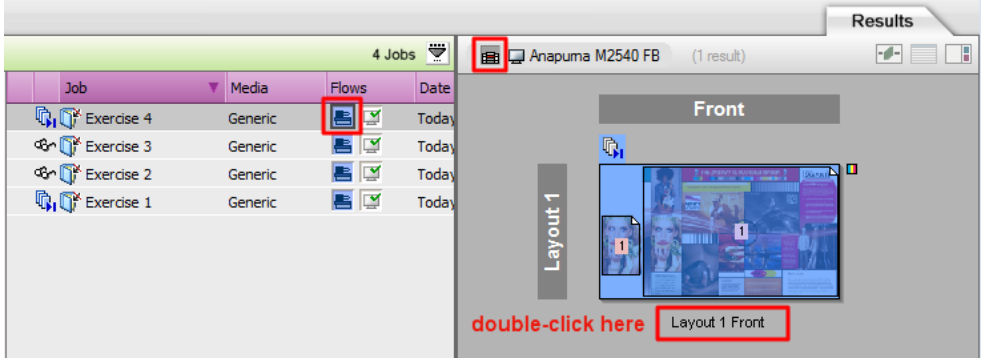


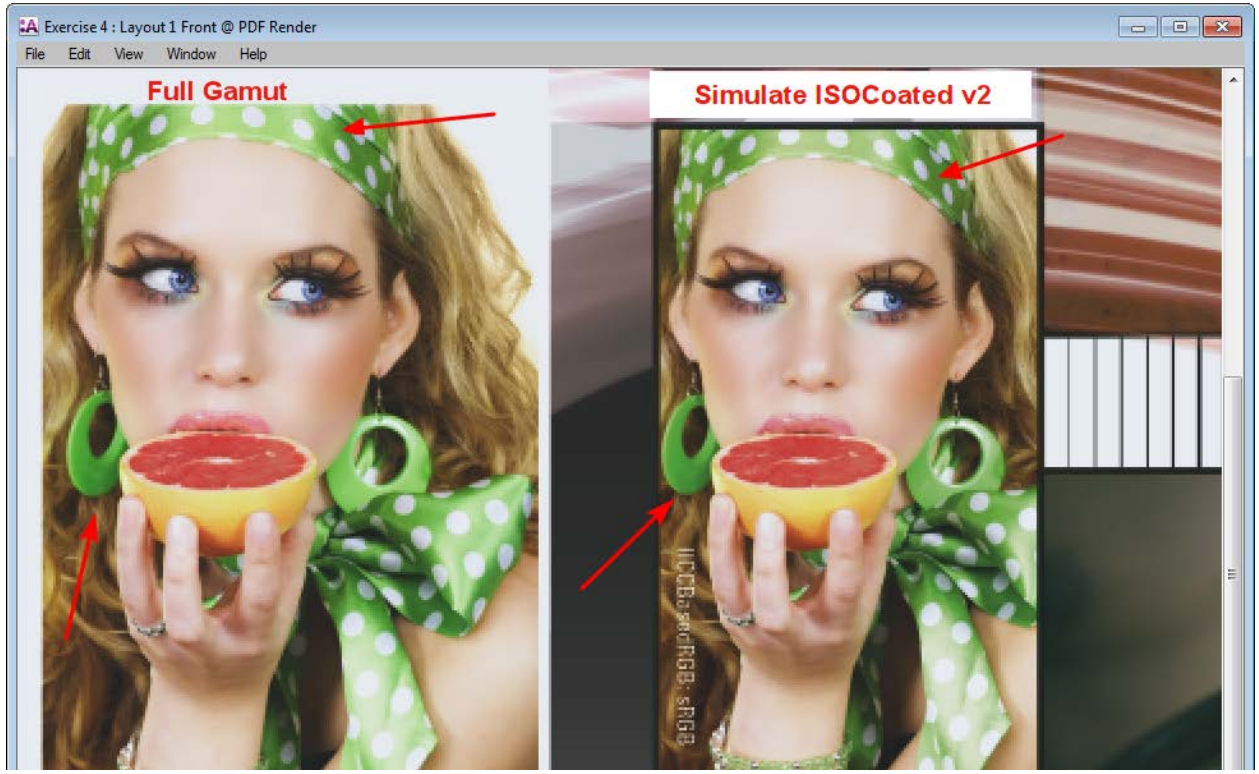
9. Drag the "Woman with grapefruit 493x740.jpg" on the Print Layout and scale it to 20%, and place it next to same image within the PDF.

Notice that by using "decide per document", images that are processed with Simulate mode and Full Gamut mode can be combined on one Print Layout. When selecting a certain CMS mode, this mode will be applied to all images within that job.

10. Submit the job, select ″Make and Hold", and wait until the rendering has finished.

11. In the Jobs pane, select “Exercise 4” and click the main output icon in the flows column.
12. Open the Color managed preview of the main flow by double-clicking on the “Layout 1 Front” label.
13. Compare the Woman with grapefruit image.
    Look for the differences between the Simulate (pdf) and Full gamut (jpg) mode. The green colors are a bit more saturated on the full gamut result.





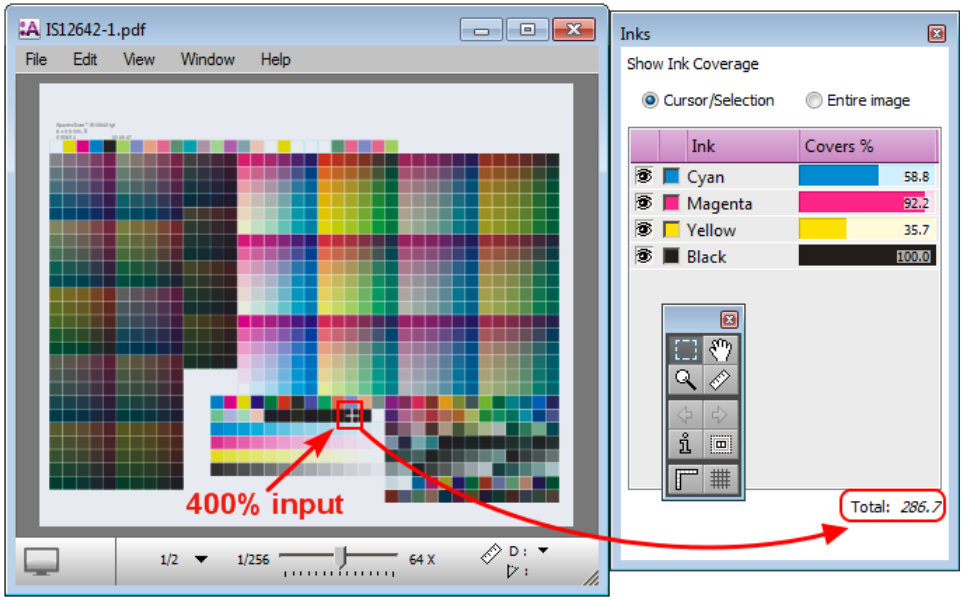
14. Close the color managed preview.

5. No CMS mode:

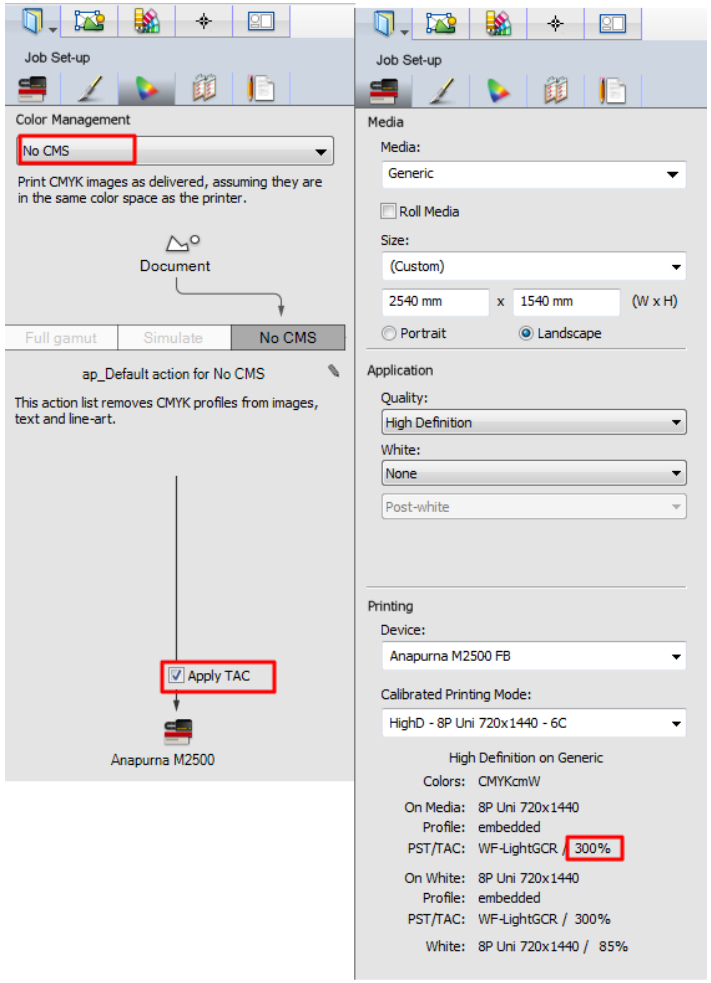
1. File menu > New layout job, change the name of the job to "Exercise 5".
2. Select the Job Set-up Inspector panel and select Generic media, a real physical engine (Anapurna or Jeti, not a GenericSD) and as Quality "High Definition".
3. Click on the CMS panel (color gamut icon): 
4. Enable the "No CMS" color management mode.

No CMS mode will, remove all tags from CMYK objects and will not convert CMYK. Colors with higher total Ink values than the TAC % will be reduced towards the TAC %. The TAC % of the press profile can be found in the Job Set-up inspector panel.

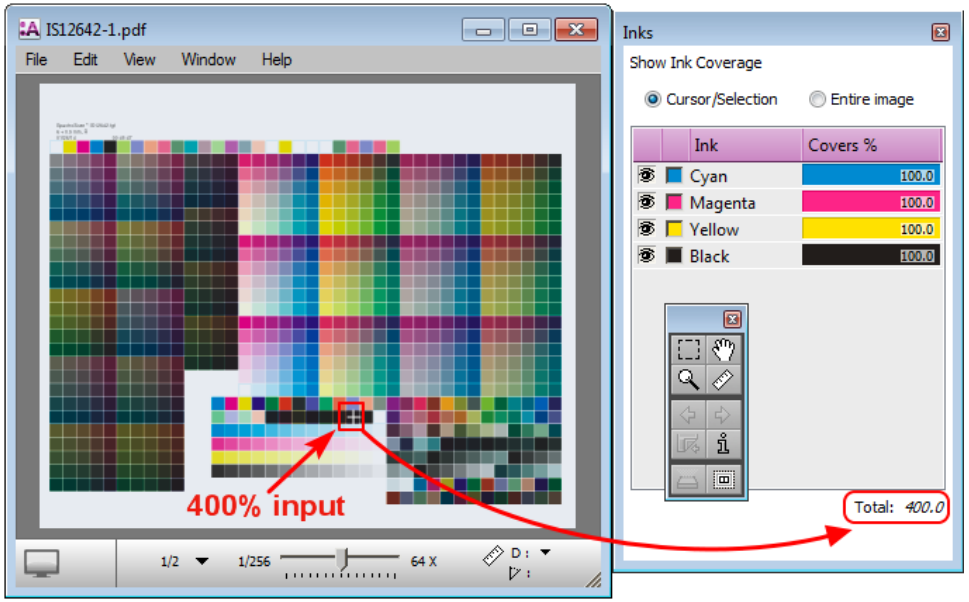
5. In the Images Panel click "+" and browse for "IS12642-1.pdf" and wait until the preview is ready.
6. Open de color managed preview and verify the TAC percentages, as well as the CMYK break down of the different patches. Notice that none of the color patches exceeds 300%.

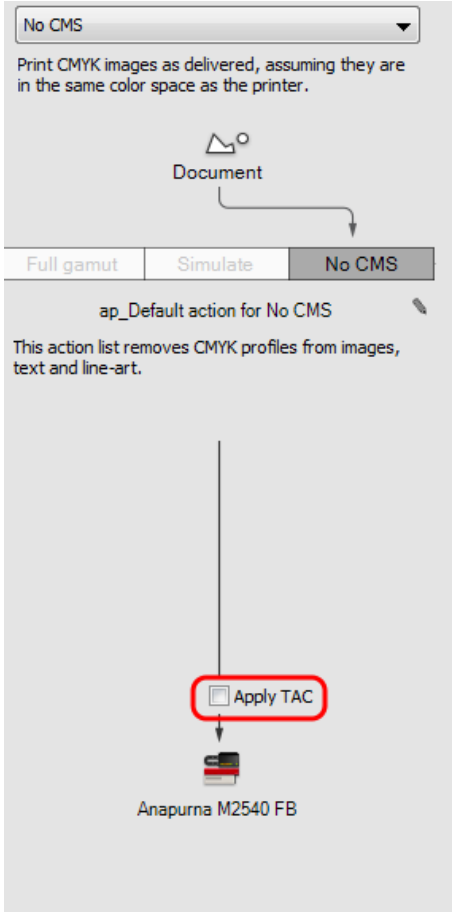


7. Close the color managed preview.



8. Disable the “Apply TAC” checkbox in the color management inspector panel.
9. Click the “Apply Changes” button and wait for the preview to become ready again.
10. Double-click on the image thumbnail and verify the TAC percentages, as well as the CMYK break down of the different patches. Notice that some of the color patches exceeds the 300%, e.g. 400%.





This mode should be used when you want to print targets to be measured (e.g. for external profile creation)

11. Submit the job, select ″Make and Hold”.