

Creating Source Profiles



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1.0 Basic Colour Management in any RIP.

All digital print environments are DFE/RIP driven, and therefore the final print is a product of colour management setting in conjunction with the device and processes.

At the basic level every RIPs colour management engine is based on 2 x icc Profiles.

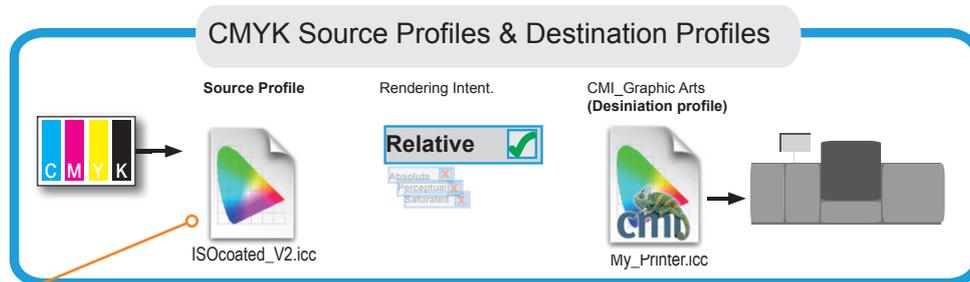
1. The Source Profile.

This is the desired goal or aim. i.e. This is what we ultimately hope to see on the printed sheet.

Sometimes referred to as the “reference profile” or the “simulation profile”, the source describes colour reproduced by another device or process which we want our digital device to emulate/simulate. Typical example would be an offset press.

2. The Destination Profile.

This contains the colour characteristics of our digital device. This is used to calculate the correct CMYK recipe needed to be put onto the paper so that Source is simulated.



All RIPs come supplied with a set of “Industry” recognised source profiles.

Examples:

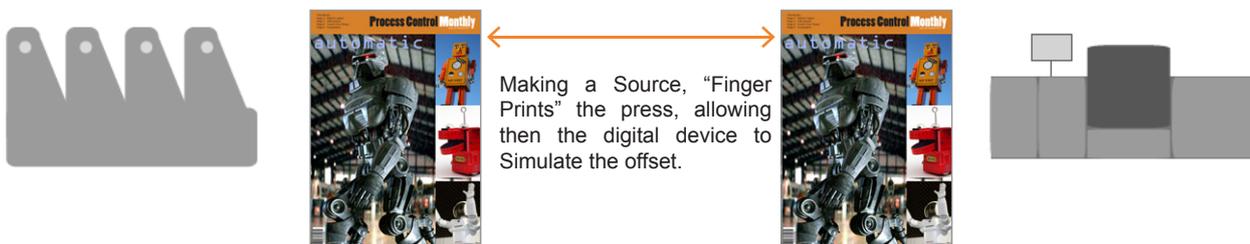
ISOcoated_V2.icc - This a “Theoretical” output of an Offset printing on coated paper, with typical European Printing conditions.

GRACoL2006_Coated1v2.icc - This a “Theoretical” output of an Offset printing on coated paper, with typical US Printing conditions.

1.1 Custom Source Profiles.

A custom source is a profile which is made to capture a “unique” printing condition. So that it can be used on the RIP to allow the digital engine to simulate that “unique” condition.

Typically you will make a custom source when the digital output does not align with an analogue print. Typically this is when a customer has there own offset house standard, and the digital device needs to, as close as possible, emulate that traditional offset press.



Customer has there own traditional printing conditions. And wishes the digital engine to be in alinement with it.

By using a Custom Source Profile and a Destination profile It is possible to aline the digital engine with analogue process.

1.2 Think! Before you start.

Although at first glance, it would seem that making a custom source sounds like an ideal way to work, it can often contain pit falls. The major one is that when you create your source profile, you capture a moment in time. If the analogue printing conditions change, due to any one of the 100's of processes which go to make the printed sheet, then you will no longer have a good "match".

And although it will be the analogue machine which has changed it will be the digital engine which gets the blame!

Industry Standard source profiles such as ISOcoated_V2 are based on many average readings and offer a good bench mark to aim at, however there will be special conditions where a custom source profile is needed.

1.3 Paper Stock

Paper has a big effect on the final result, if you are working with a toner machine then using the same stock as the offset will help, however for inkjet proofers you will need to find a stock which has a good match to the offset machine.

1.4 Preparing to make a source profile.

Before you start you should be familiar with the OPTIMIZATION process, (documented in the download section of the website in the Basic User Guide.pdf). You should have your optimized.pdf (for your spectro) and have ColorPort or i1Profiler configured to measure the target.

1.5 Processing & Printing Optimize PDF.

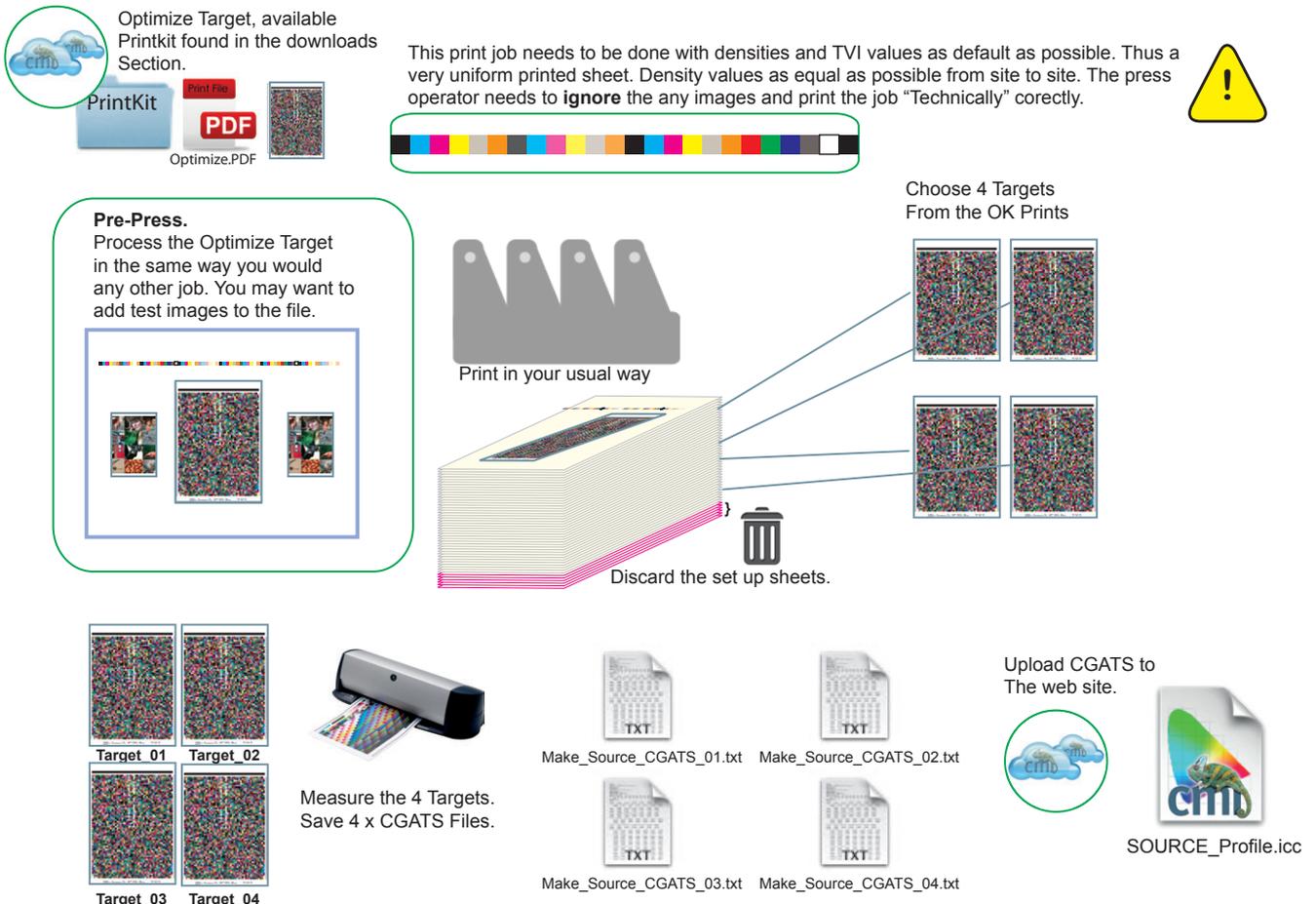
The Optimize PDF file, needs to be processed in the exact way you would treat any other commercial print job. You may want to add "test images" to the plate so you have a visual guide.

Once on press it should be handled exactly as you would normally.

Once the job is printing OK (Its can take sometime for a analogue machine to run up to a stable condition), print 200 sheets, remembering to discard the set-up sheets.

Take 4 samples of your target from the batch of the 200.

Make the 4 measurements, saving them as CGATS, upload to the website against your Source Profile workflow.

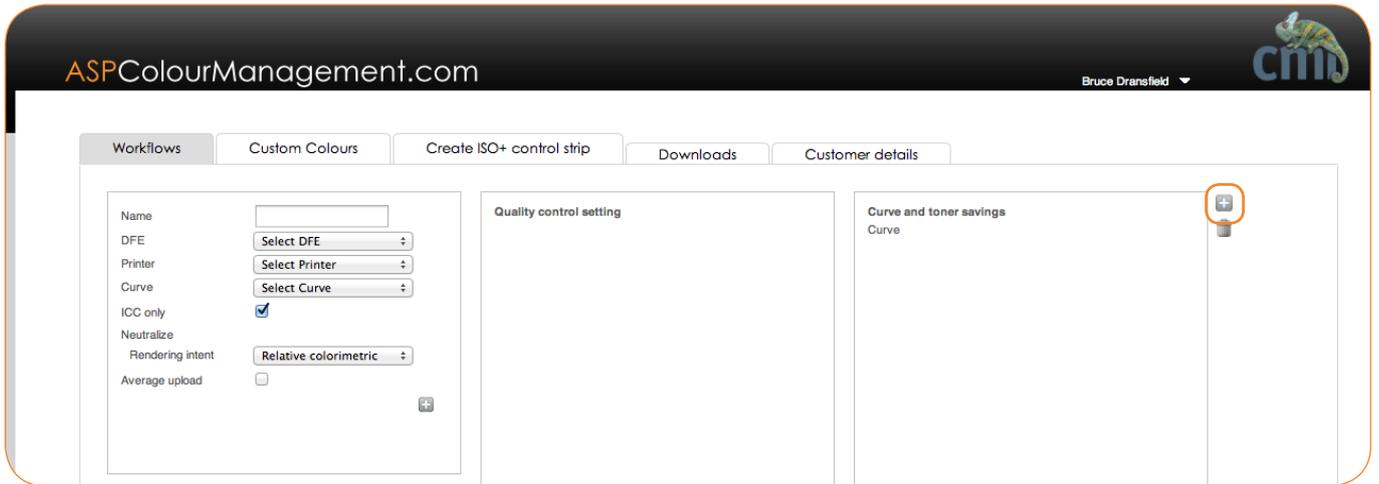


1.6 Creating a Source Profile Workflow.

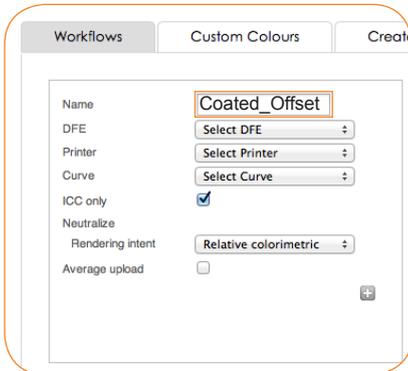
1. Click on the Service Page button.



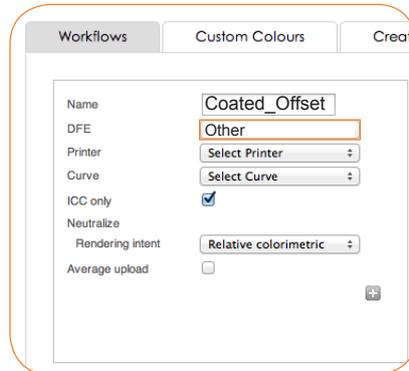
2. Click the + button to create a new workflow.



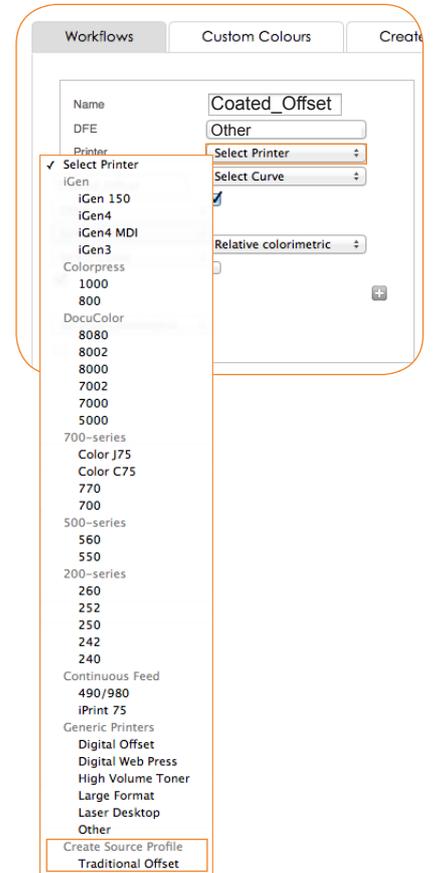
3. Give your workflow a name.



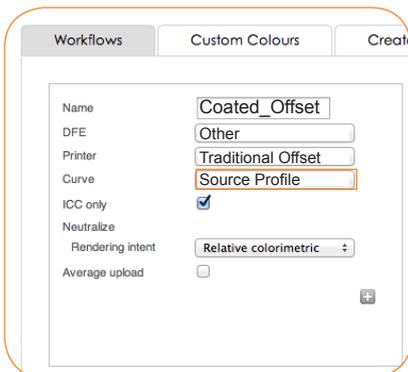
4. In the DFE drop down. Choose "Other"



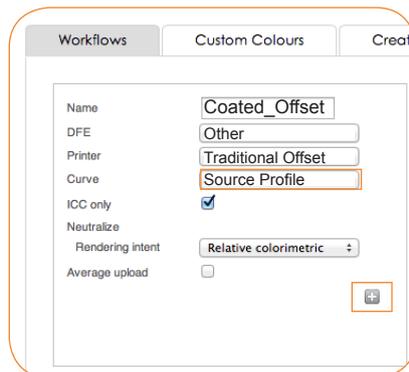
4. In the Printer drop down. Choose "Traditional Offset"



5. In the Curve drop down. Choose "Source Profile"

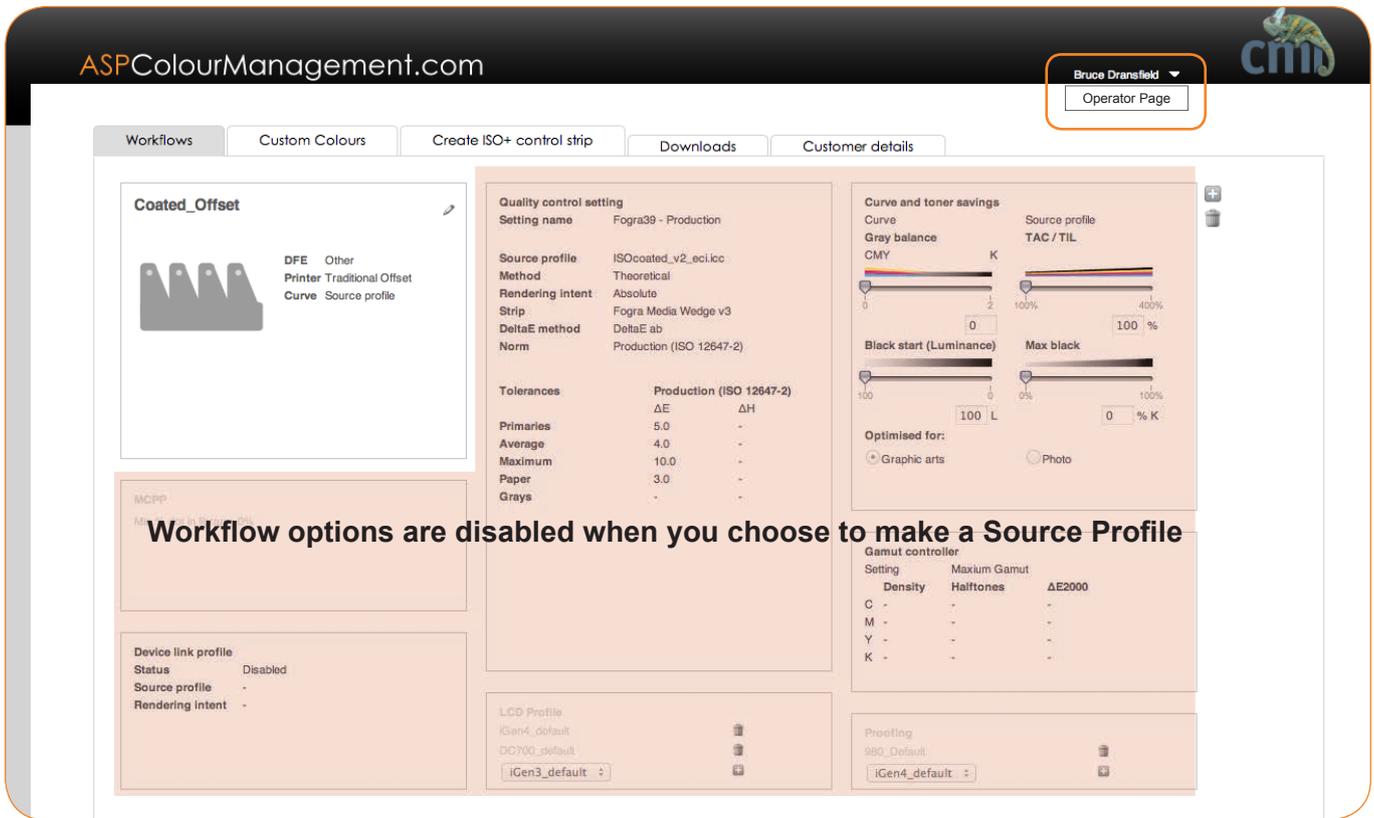


6. Click the + button to finish.

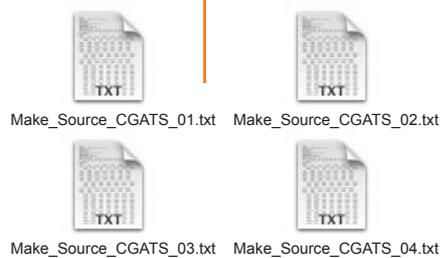
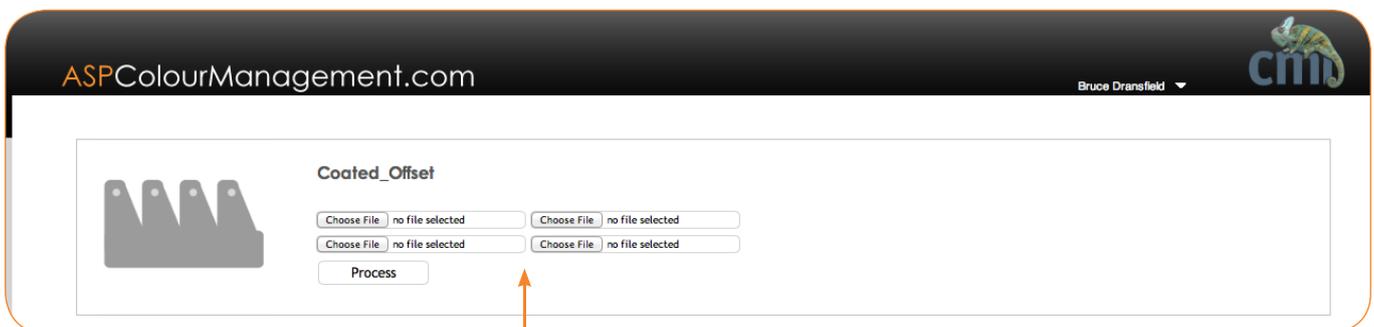


1.6 Creating a Source Profile Workflow.

7. When you choose the Source Profile Option, all other options become inactive.
8. Go back to the operator page.



9. Upload all 4 CGATs files. Make sure each field is filled out before you press Process.



Import 4 CGATS at once.
 Click Choose file and browse to your CGATS file.
 Do this 4 times. **Only** when you have all 4 files loaded in the interface, do you press Process. The website will make a SOURCE profile based on an average of all readings. (Note: 1, 2, 3 or 4 files can be used, however 4 is highly recommended.)

1.6 Creating a Source Profile Workflow.

10. Download your Source ready to load into your DFE/RIP.

The screenshot shows the ASPColourManagement.com website interface. At the top left is the logo 'ASPColourManagement.com' and at the top right is the user name 'Bruce Dransfield' with a dropdown arrow. Below the logo is a 'Coated_Offset' workflow card. On the left of the card is a grey icon of three vertical bars. To the right of the icon are four 'Choose File' buttons, each with 'no file selected' text below it. Below these buttons is a 'Process' button. To the right of the workflow card is a metadata bar containing '30 May 2013', 'Bruce Dransfield', 'Optimize', and a yellow 'Download' button. An arrow points from this 'Download' button to the 'Download' button in the pop-up message below.



POP UP MESSAGE.

You are warned that the profile is only valid for use in the Source/Simulation part of your RIP workflow.

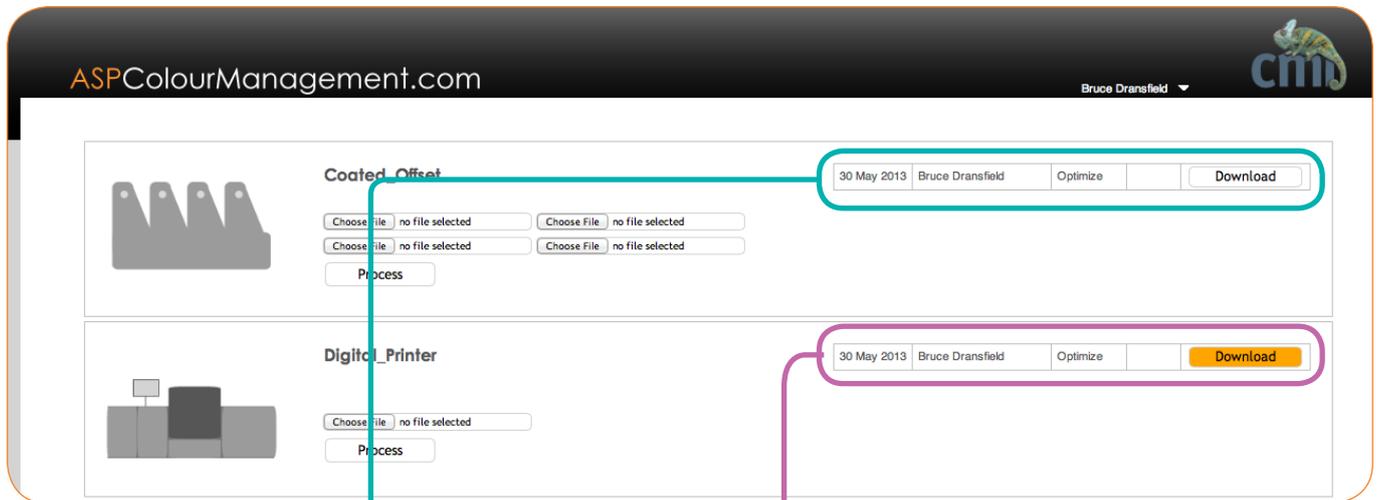
The pop-up message box has a grey border and a close button in the top right corner. It contains the following text: 'Workflow: Coated_Offset', 'Uploaded file: Optimize_1000.txt', 'Note: Source profile, can not be used as Destination profile.', and 'The ICC-profile: Coated_Offset_30May13.icc'. At the bottom of the box is a 'Download' button. An arrow points from this 'Download' button to the file icon on the right.



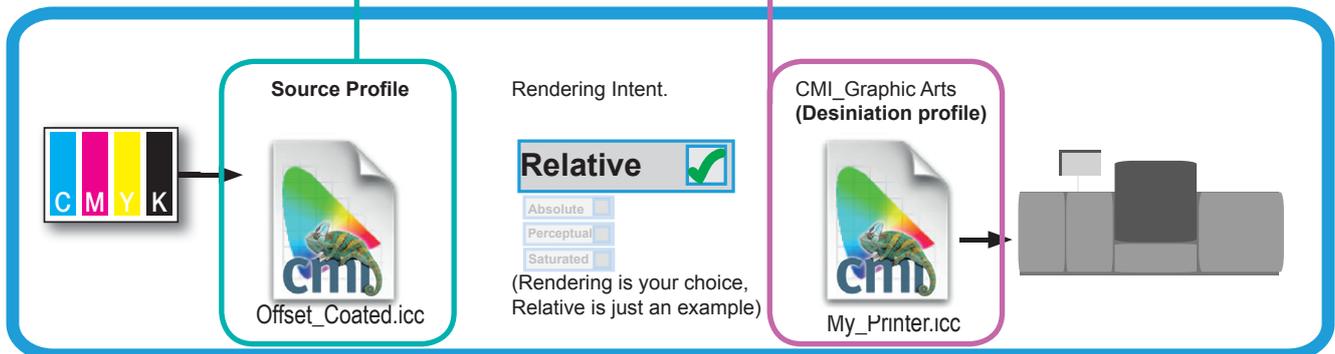
Coated_Offset_30May13.icc

1.7 Configuring your DFE to use a new Source Profile and Destination Profile.

1. Create a Source Profile as described in chapter 1.6
2. Create a Destination profile for your digital printers as described in the DFE set up manuals and Basic User Guide.
3. Take care in loading the source profile on the DFE as you will have to select different options.
4. Load the Destination profile on to the RIP, and configure your workflow correctly.



RIP/Workflow Config.



Rendering.

The paper colour has a big impact on the visual result. If you use the same substrate on the toner based machine, then relative would be a good choice. However if this is not possible then Absolute might give you a better result, but be warned, the DFE/RIP may try and reproduce the paper white held in the Source Profile.

1.8 Configuring your DFE to use a new Source Profile Using Device Link Profile.

1. Create a Source Profile as described in chapter 1.6
2. When you make a Custom Source Profile, your new profile is added to the Source Profile Drop down menu in the Device Link Editor.

The screenshot shows the 'Digital_Printer' workflow configuration page. A dropdown menu for 'Source profile' is open, displaying a list of profiles. The 'Coated_Offset_30May13.icc' profile is highlighted at the bottom of the list. The background shows various settings for the workflow, including quality control settings, curve and toner savings, and gamut controller options.

The screenshot shows two workflow cards: 'Coated_Offset' and 'Digital_Printer'. The 'Coated_Offset' card has a 'Download' button highlighted in yellow, indicating it is the active or selected workflow. The 'Digital_Printer' card also has a 'Download' button. The interface includes file selection options and a 'Process' button for each workflow.

1.8 Configuring your DFE to use a new Source Profile Using Device Link Profile.

3. Configure your Device Link settings, and create your device link profile via the operator page.

The screenshot shows the ASPColourManagement.com interface. The 'Digital_Printer' workflow is selected. A callout box titled 'Device link profile' displays the following settings:

- Status: Enabled
- Source profile: Coated_Offset_30May13.icc
- Rendering intent: Relative colorimetric
- Preserve colours: None

The background interface shows various settings for the workflow, including Quality control settings (Fogra39 - Production), Source profile (ISOcoated_v2_ecl.icc), and Curve and toner savings options.

The screenshot shows two workflow cards: 'Coated_Offset' and 'Digital_Printer'. The 'Digital_Printer' card has a 'Download' button highlighted with a red circle. An arrow points from this button to the next section.



Device Link.

Not all RIPs/Workflow can use Device Links. The Source Profile and the Destination Profile and Rendering, are "Fused" as one file. CMI's Device Links, have the name tag "DL"

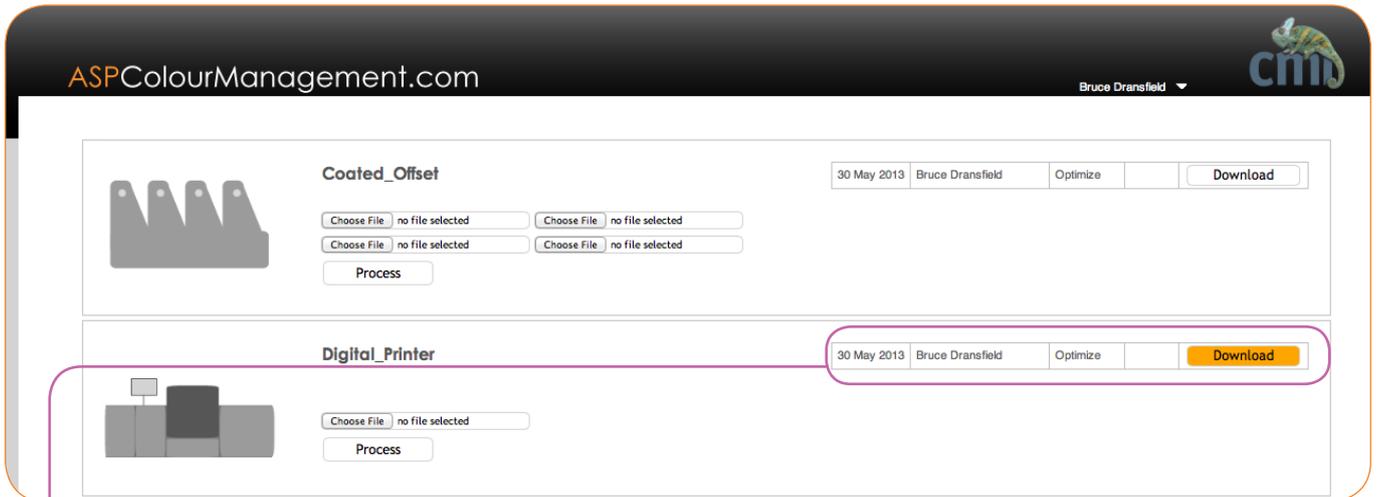
Workflow: Digital_Printer
 Uploaded file:
 Optimize_1000.txt
 The Device link profile: Digital_Printer_31May13_DL.icc
 Download



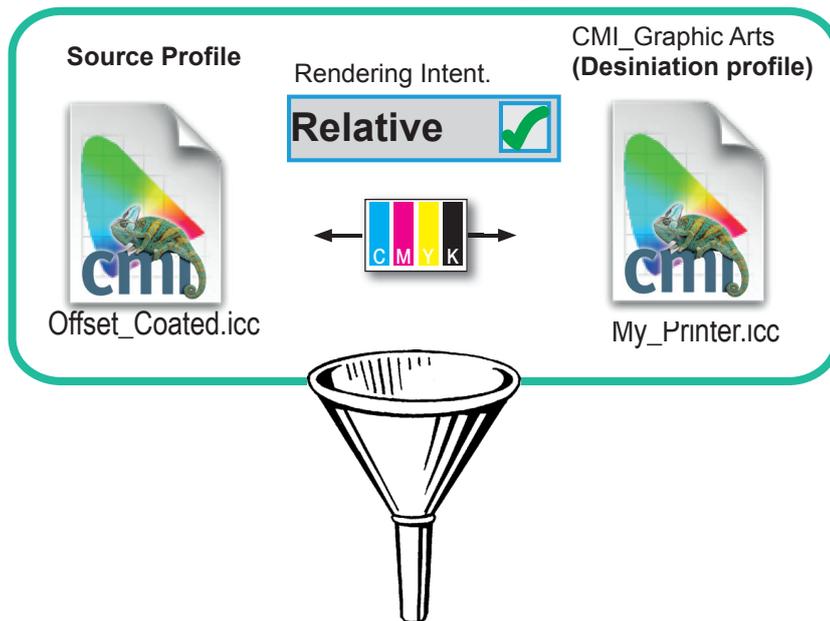
Digital_Printer_31May13_DL.icc

1.8 Configuring your DFE to use a new Source Profile Using Device Link Profile.

4. Install Device Link on the RIP/DFE or workflow.



Content of a Device Link



Device Link
 The device link is a single file, therefore only one download. The device link contains a "fusion" of both the Source and Destination and rendering intent.

RIP/Workflow using Device Link



1.9 Editing Quality Control, to use the New Source Profile.

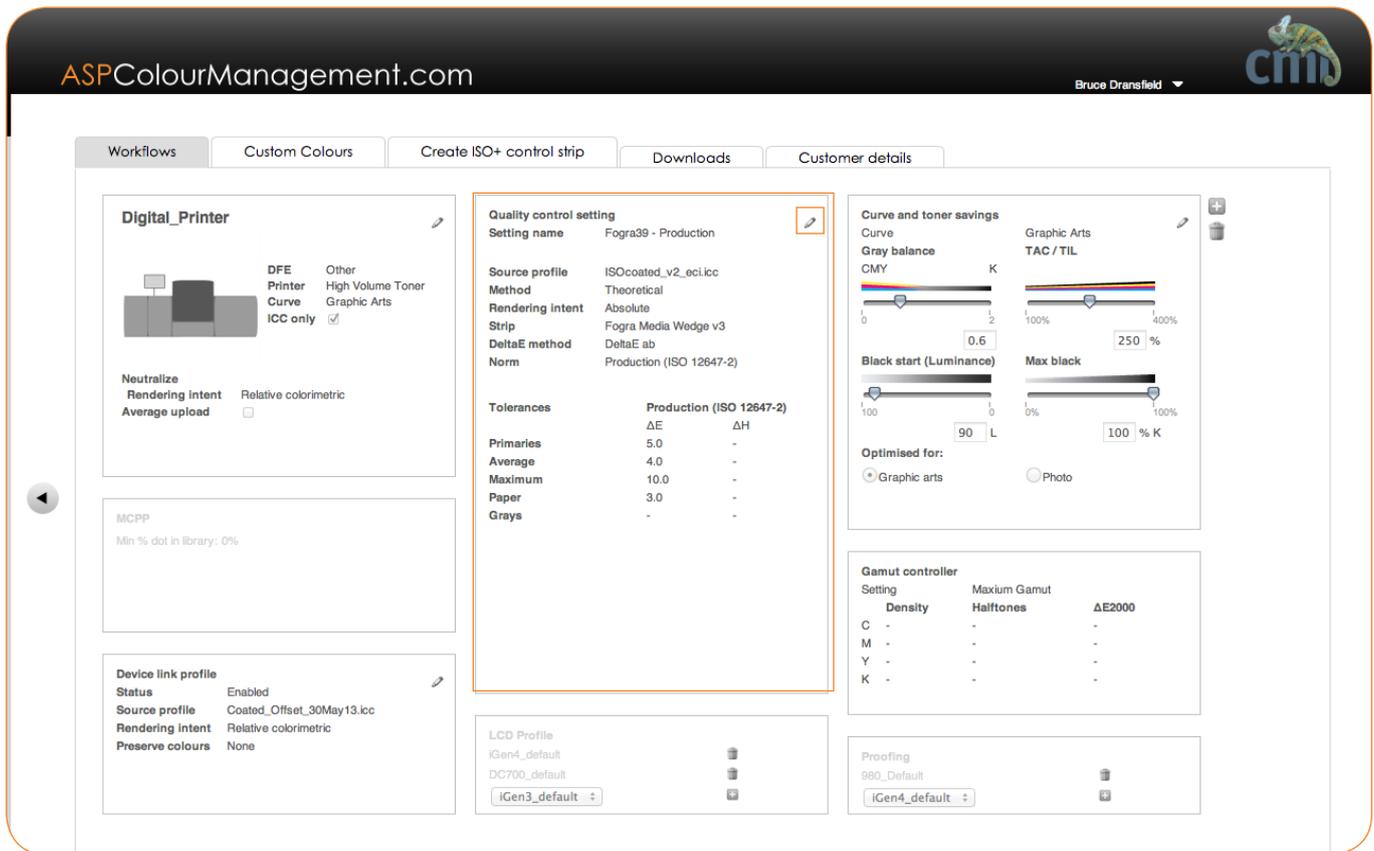
For a full and concise understanding of the Quality Control options available please read through the Quality Control Manual available in the downloads section.

Now you have a new source profile in the digital device. The output from the digital device should now be in line with the device you are emulating.

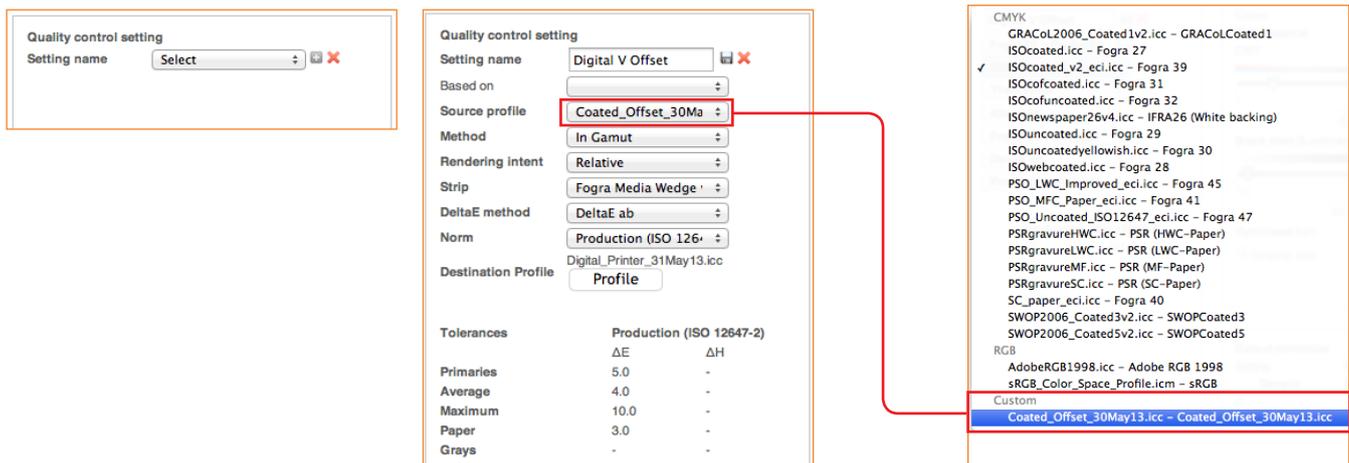
Your VERIFY (Quality Control) routine on your digital device now needs to take into account of your new source profile.

Here is an example of how to change your QC values.

1. Open service page and browse to the digital printers workflow which is now set to print with the new source profile.
2. Locate the Quality Control Panel. Click  to edit.



3. Click  to start to make a new Quality Control. Create for New PCA (See Quality Control Manual). Your Custom Source Profile is available in the drop down menu.

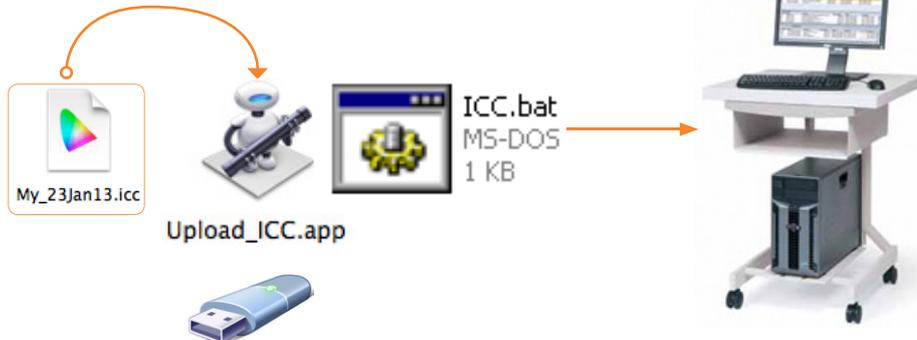


2.0 Loading Source Profiles onto FreeFlow Server.

The FFPS set up Manual in the downloads should have been followed!

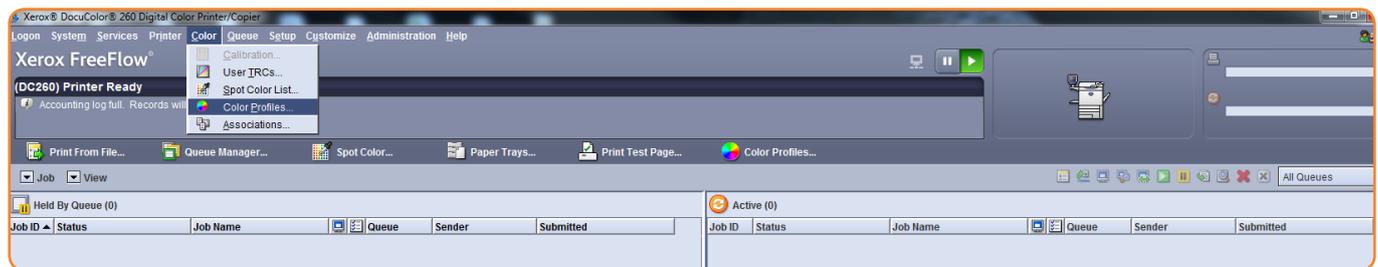
First use your workflow .app or .bat file to move the ICC profile to the RIP. Or you can copy the profile onto a flash drive and manually put it on the RIP.

Drag and Drop the ICC profile onto the ICC.bat/ICC.app icon. The Profile will move to the RIP.



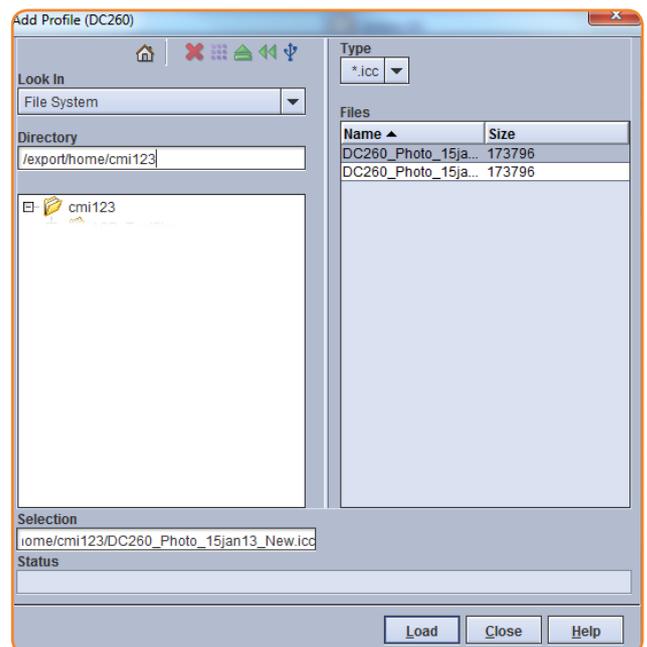
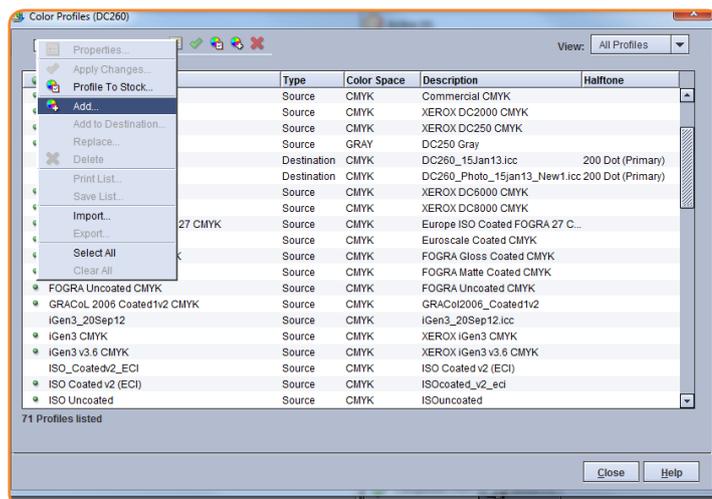
The Profile is saved to the RIP.
The path to the profile is.
/export/home/cmi123
See section; Loading Profiles.

From the **Color Menu**, choose **[Color Profiles]**.



In the Color Profile window. Click the drop down menu in the left corner, choose **Add**.

If you use the .app or .bat workflow your profiles will appear at **/export/home/cmi123**
You might need to “refresh” the window to see your profiles.



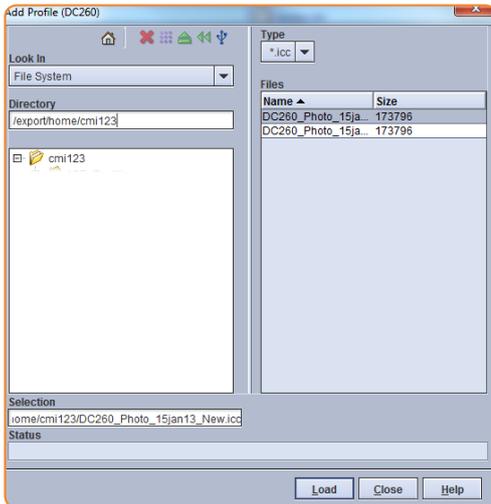
Loading Profiles onto FreeFlow Server.

Browse to /export/home/cmi123, choose the profile you want to use, from the list.
The profile Properties window opens.

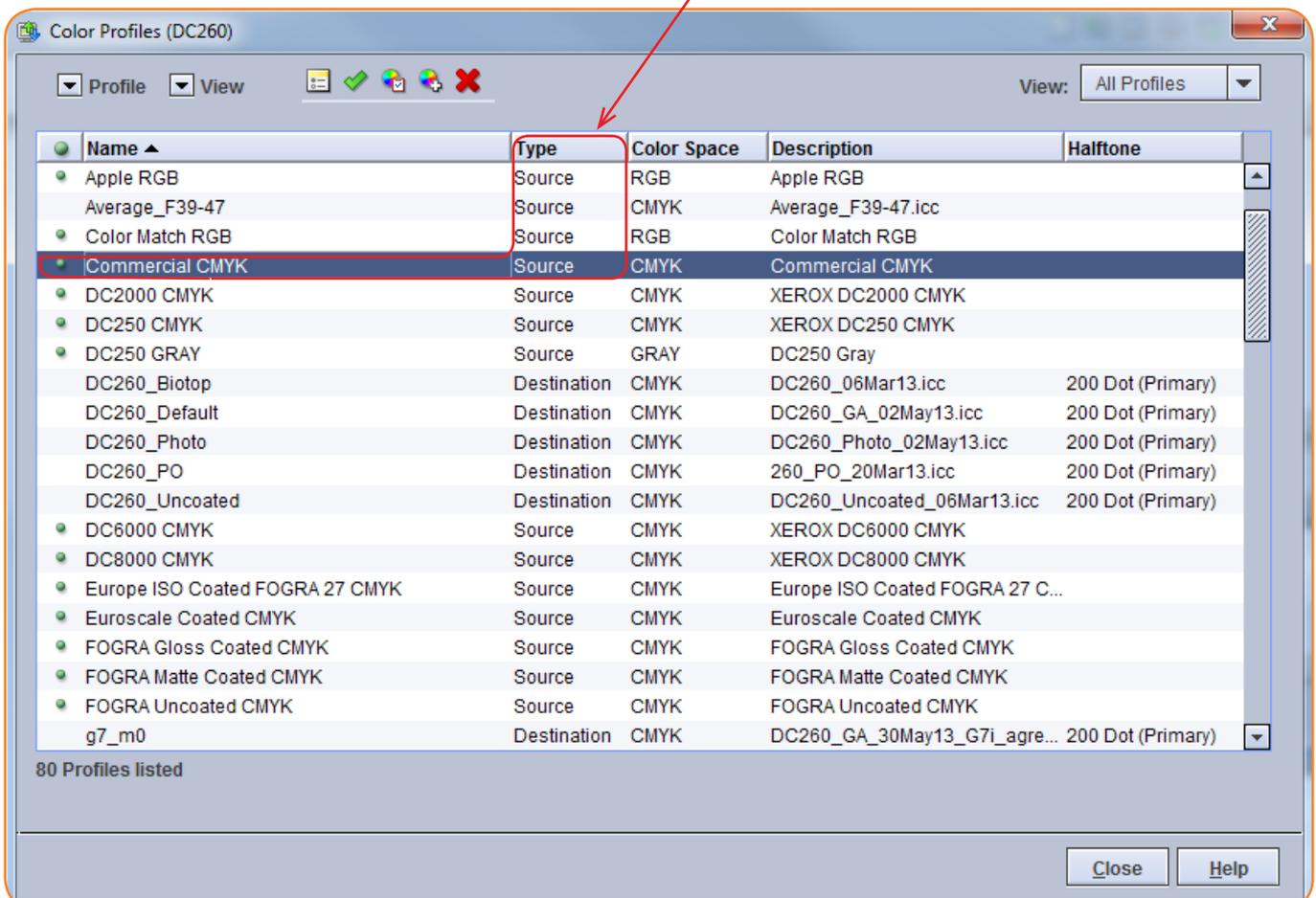
CLICK **Add as Source Family**

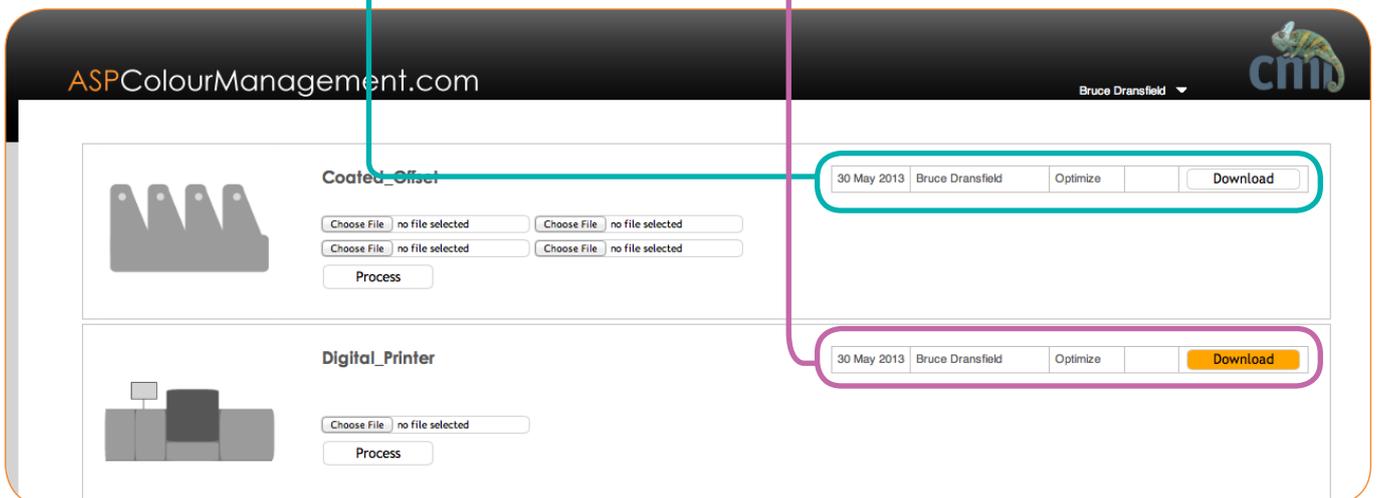
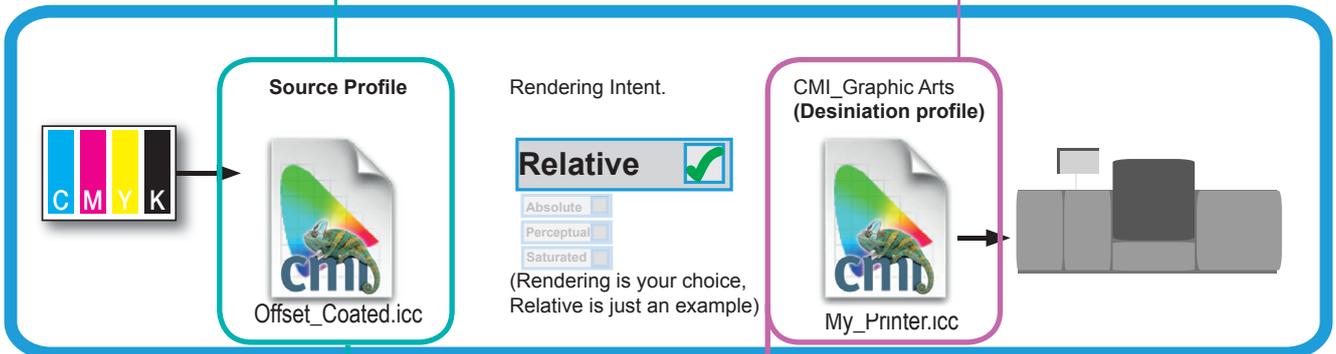
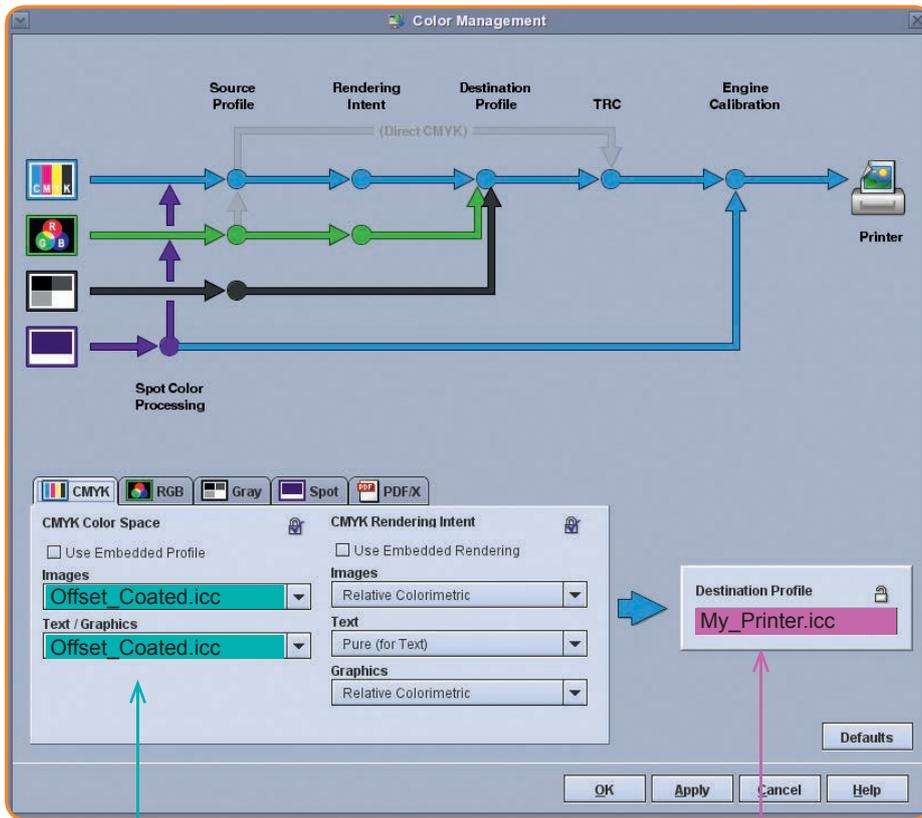
Type a Generic Name that makes sense in **Profile Family**. eg. **My_Offset**

The Profile Family name acts as a “place holder” it is the name you will choose in the production queue.
Press OK.



When you have loaded the profile it will appear in the list as a “Type” - Source.





Support.

We understand that for all our best efforts in making an easy to use platform, colour control remains a difficult subject. We have many support resources to help you, which all start by writing a email. Please also check frequently for updated manuals and new released options in the CMI service.

support@cmicc.com

Thank You.

Our goal is to make a powerful and evolving tools, which benefits your business. We thank you for using our product & wish you great success in mastering your colour environment.

Team CMI

