CMYKS Advanced Separation Guide

Aspen CMYKS doc. Xitron.
Version 1. 2/25/16. NPD & EPN
Version 2. 4/15/16. EPN
Version 3. 4/18/16 EPN

Introduction
This document will cover the concept of Separation Styles in the RIP and talk about how the different choices you make there affect your output. At the end of the document is an appendix that talks about configuration file settings that you may wish to know about. Ideally, you will have first read through the Aspen CMYKS Quick Start Guide before reading this document.

There are two different ways to configure your CMYKS system for color output. You can either choose one or set up the system with workflows for each method, depending on what you wish to do. I'll discuss the different use cases in this document. They are:

1. Output jobs with any number of colors to a 4 color press.
2. Output 4-color jobs to a 5 color press.
3. Output 5-color jobs to a 5-color press.
4. Output 5-color jobs to a 5-color press. With varied ink remapping.
5. Output 6(or more)-color jobs to a 5-color press. All spot colors print CMYKS.
6. Output 6(or more)-color jobs to a 5-color press. With varied ink remapping.

The key to a 5 color press lies in understanding the Ink Remapping function of the Navigator Server and Clients as well as the Separation Styles in the RIP.
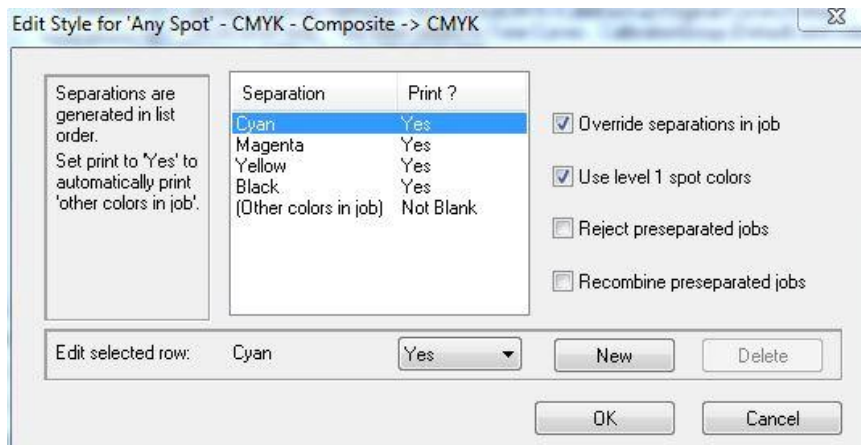
Separation Styles
A four color press is simple. The separation style for "other colors in job" is "No".
It looks like this:
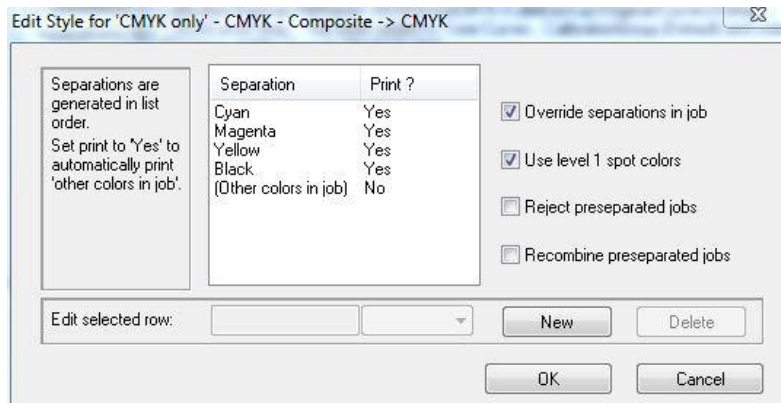
All spot colors will be converted into some recipe of CMYK. The specific CMYK recipe will either be the one included in the job, or the one substituted by Navigator.

A five color press has two choices for "other colors in job" in the separation style: *not blank* or *specifically named.*

Above you can see the "Not blank" separation style. This will allow you to use any spot color in a job and print it on the spot color channel of your Aspen press.
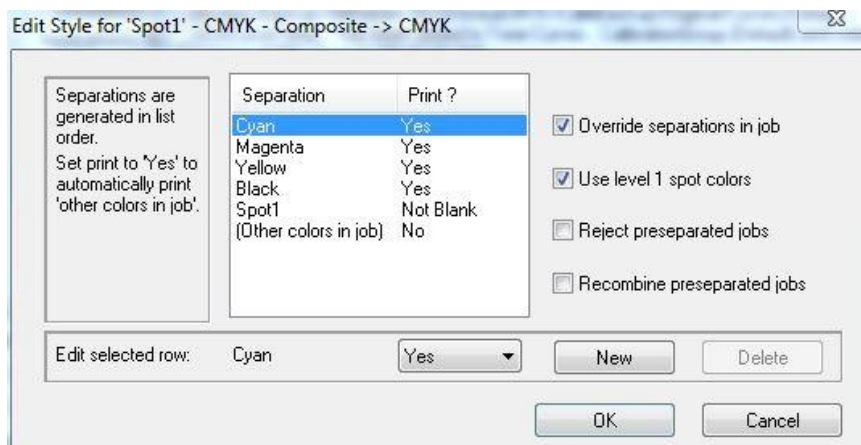

Above you can see the "specifically named" separation style. This will allow colors named "Spot1" onto the spot channel or CMYKS. Any additional colors in the job will be put onto the CMYK channels only. Whatever color name you put here is what will be allowed. "Pantone 185 C" or "Fred's Red" or any alphanumeric characters are allowed.

Below you can see an alternate way of doing the same thing. This would be for users who have more than one name for their "house" spot color.

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They can map colors named either "Spot1" or "Spot2" onto the CMYKS channels. Other colors may be mapped to CMYK recipes.
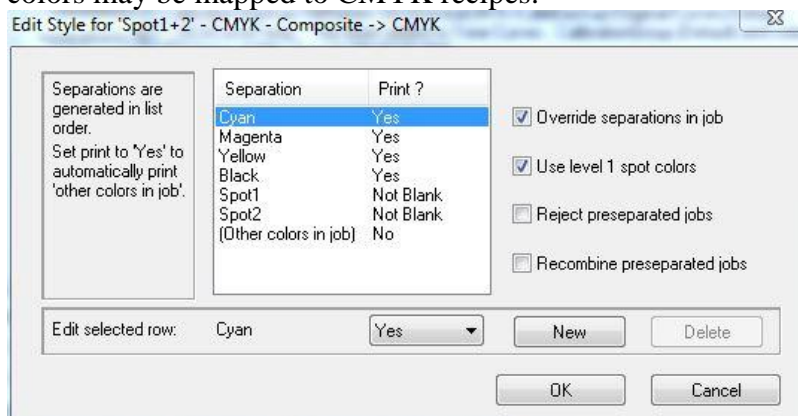
Quick reference separation style Chart:

| Colors in job	Output scenario	RIP Sep Style for other colors*
	4 color press	
any	Output on 4 color press	*no*
	5 color press	
4	Output on 5 color press	1,2
5+	all spots remap to CMYKS	1,2
5	some 5th colors remaps to CMYK, some to CMYKS, depending on job	2
6+	Some colors remap to CMYKS, some convert without remap to original CMYK recipe	1,2
6+	Some remap to CMYKS, Some remap to CMYK.	2

* There are two choices for a 5 color press.

1. Not Blank

2. Specifically named

1. ***Output jobs to a 4-color press.***
Use this CMYK separation style:
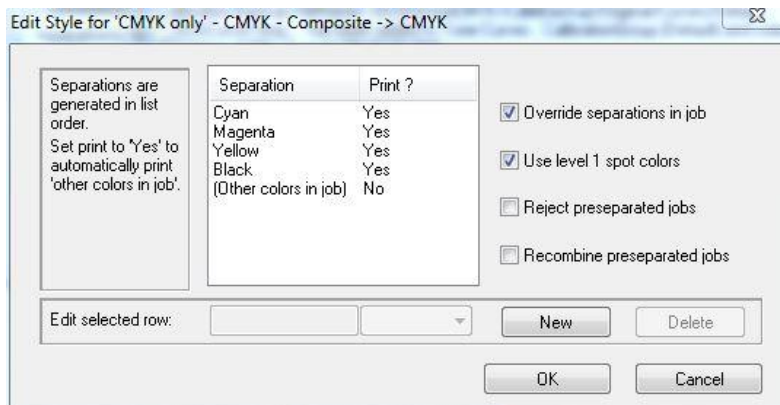
2. ***Output 4 color jobs on a 5 color press***
On a properly configured system a 4 color job will output through any of the separation styles.

3. ***Output 5-color jobs to a 5-color press.***
In this case, your spot ink perfectly represents the output you desire. No mixing is necessary. The prepress department creates jobs of CMYK + 1 spot color of any name.
They send that job to a RIP which is configured with an appropriate separation style:
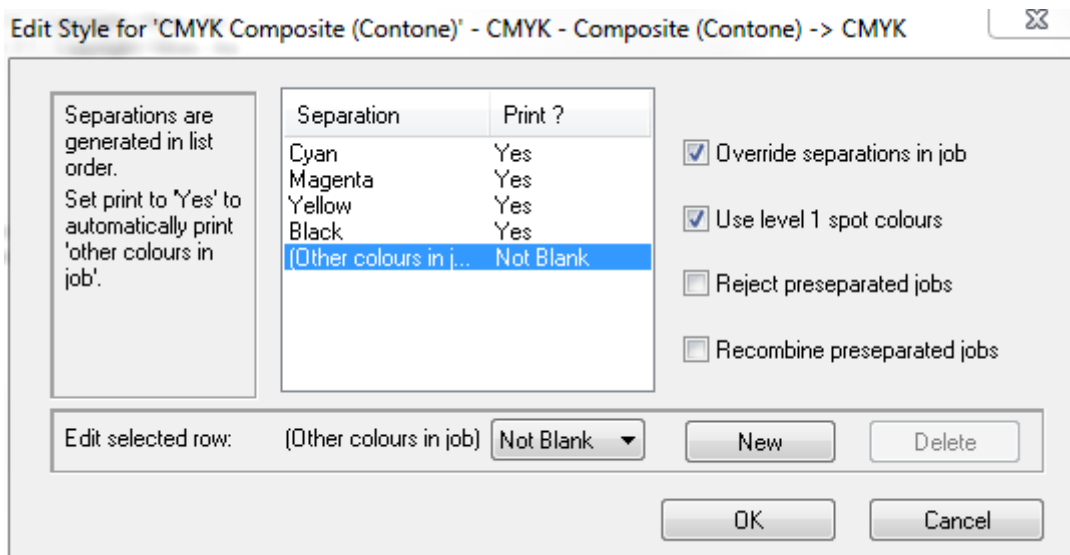
Each channel in the job goes to a corresponding channel at the press.

If you send it to a workflow that looks like the one below, it will output the 5th channel data to the 5th channel.

2. Press Output

HotFolder   **Aspen RIP**
Aspen CMYKS

4. **Output 5-color jobs to a 5-color press. With ink remapping.**
   The prepress department creates jobs of CMYK + 1 spot color of any name.
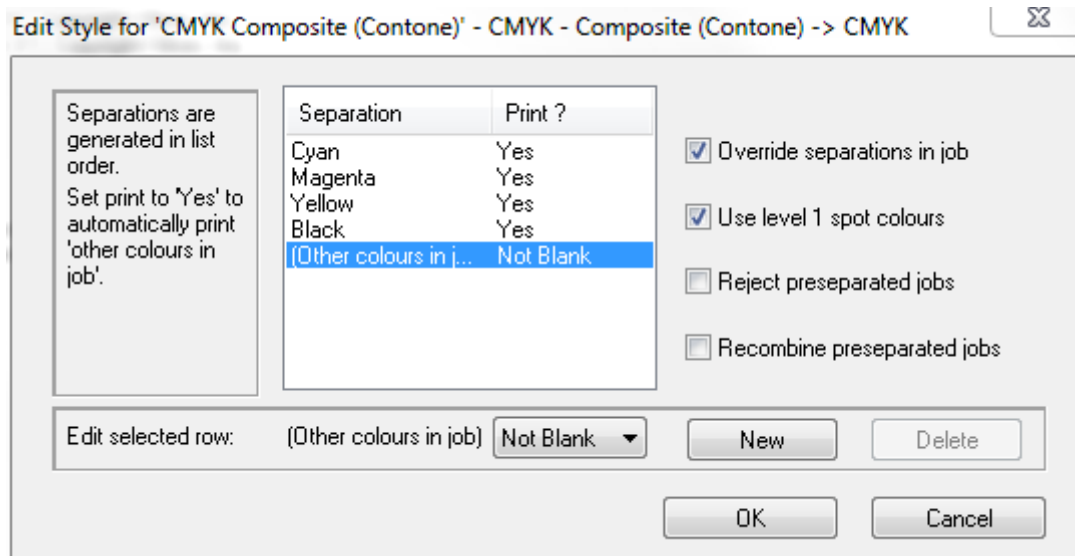   There are two possible desired outcomes.
   1. The fifth channel is remapped to CMYKS all of the time
   2. The fifth channel is sometimes mapped to CMYKS and sometimes mapped to CMYK.
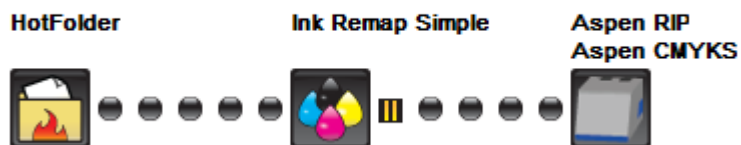
Case 4a. CMYKS.

Send that job to a RIP which is configured with an appropriate separation style:

If you send it to a workflow that looks like the one below, you will need to instruct the ink remap function to use a specific mixture of ink for the spot color channel.
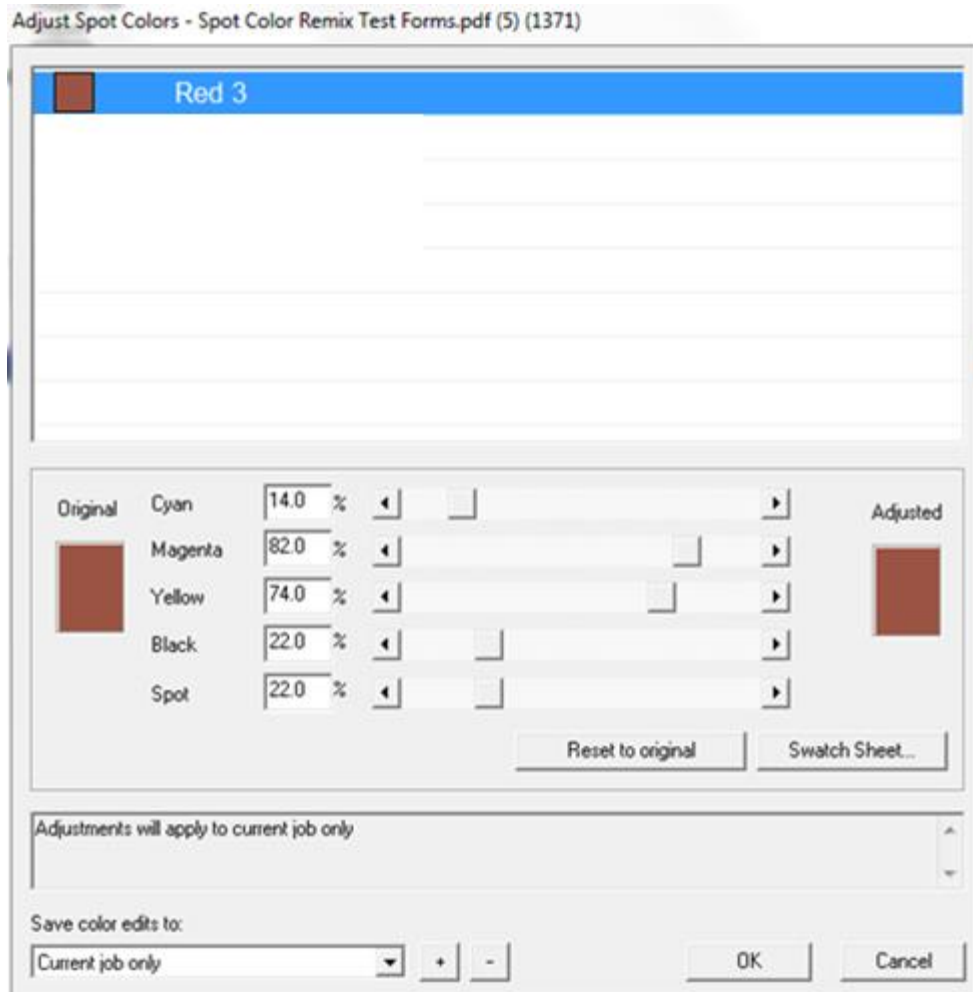

Right click the job and choose "edit spot colors".

In the Spot Color Adjustment dialog box you may choose to save your spot color edits to a re-usable database or you may elect to use these edits for this job only.
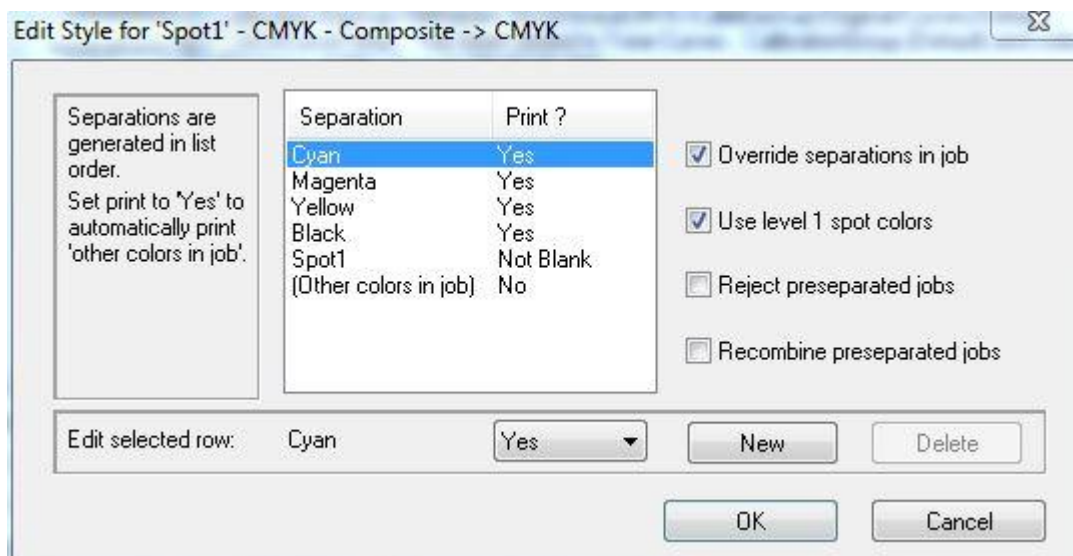If you save the color edits to a database you may construct a workflow which automatically applies that change with no user intervention.

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Case 4b, CMYK or CMYKS.

Instruct the prepress department to construct jobs for the spot ink channel with a specific spot color name. In the case below, "Spot1". Send jobs to an appropriate separation style:

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When jobs are sent with a 5th color named "Spot1", they may remap that color onto CMYKS. Other spot colors sent into the system will be possible to map to CMYK recipes.
If there is more than one source for input files, perhaps there will be more than one name used for the spot color. In that case, add more to your list of allowed colors, as shown below.
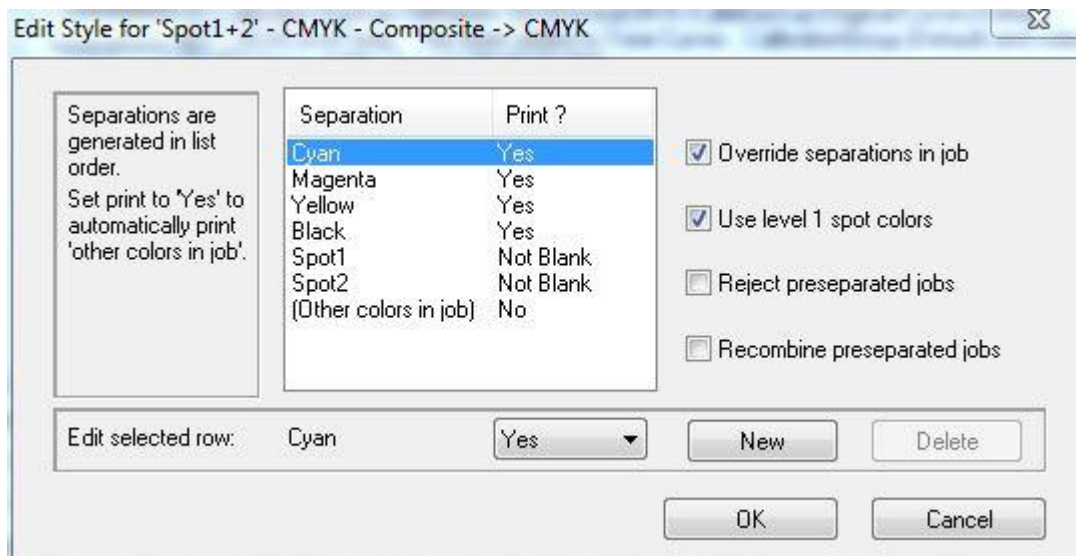
You will be allowed to map Spot 1 and 2 to CMYKS recipes. You can map any other color (such as "Spot3" below) to a CMYK only recipe.
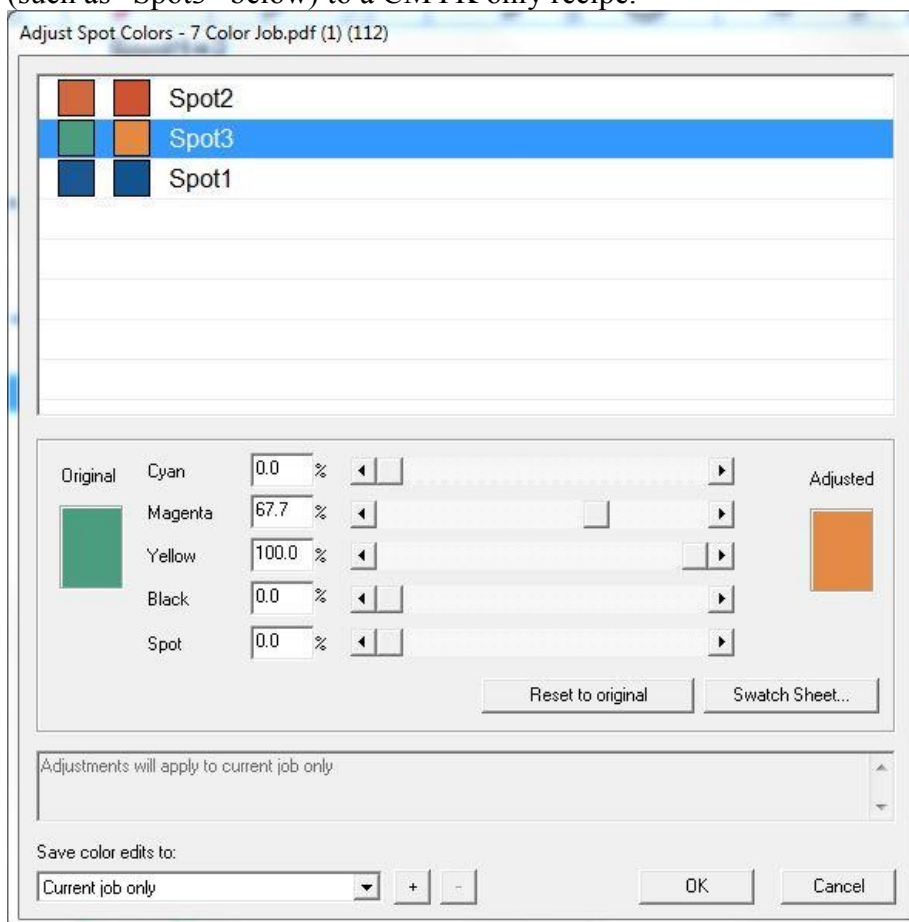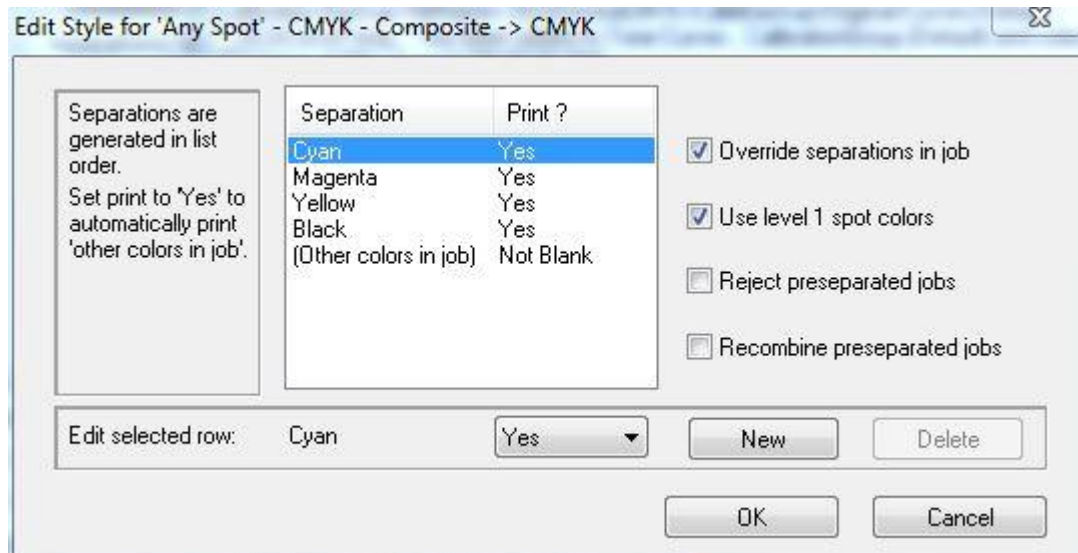
5. ***Output 6-(or more)color jobs to a 5-color press. All spot colors print CMYKS.***
   The prepress department creates jobs of CMYK + 2 or more spot colors.
   There are two ways to get that to print on CMYKS channels.
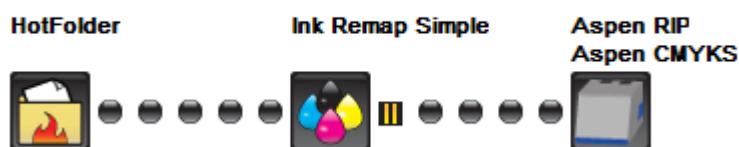
   Case 5a.
   Send the job to a RIP which is configured with an appropriate separation style:
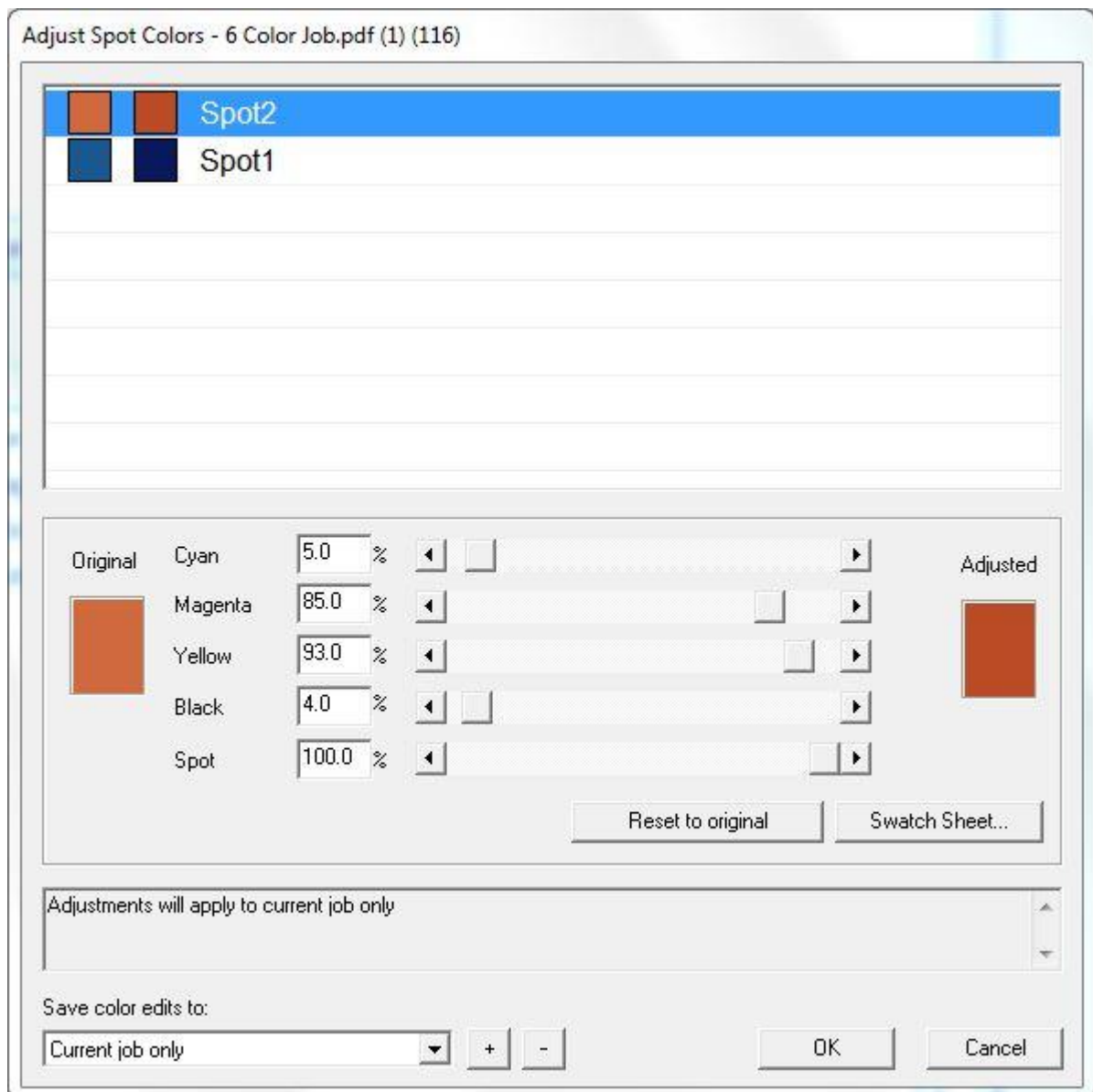

   If you send it to a workflow that looks like the one below, you will need to instruct
   the ink remap function to use a specific mixture of ink for the spot color channel.

   Right click the job and choose "edit spot colors". Edit each spot color to some
   mixture of CMYKS.

In the Spot Color Adjustment dialog box you may choose to save your spot color edits to a re-usable database or you may elect to use these edits for this job only.
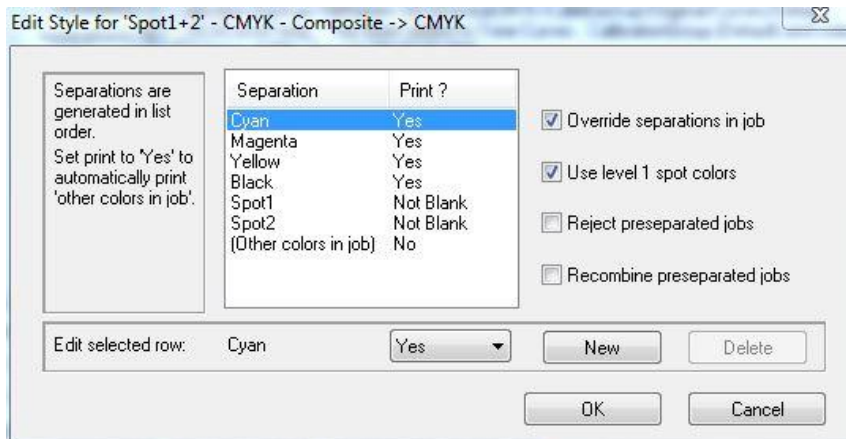If you save the color edits to a database you may construct a workflow which automatically applies that change with no user intervention.
In this case, you must map every spot color to CMYKS, with at least some amount of S in every color.

Case 5b.
Send the job to an appropriate separation style:

Your job must have each color you want on the spot channel to appear in the separation style, specifically named.

6. *Output 6-(or more)color jobs to a 5-color press. Some spot colors print CMYKS, the remainder print CMYK.*

The prepress department creates jobs of CMYK + several spot colors. The spot colors which they wish to be converted to CMYK may have any name at all. The spot color they wish to print CMYKS must be specifically named in the separation style:
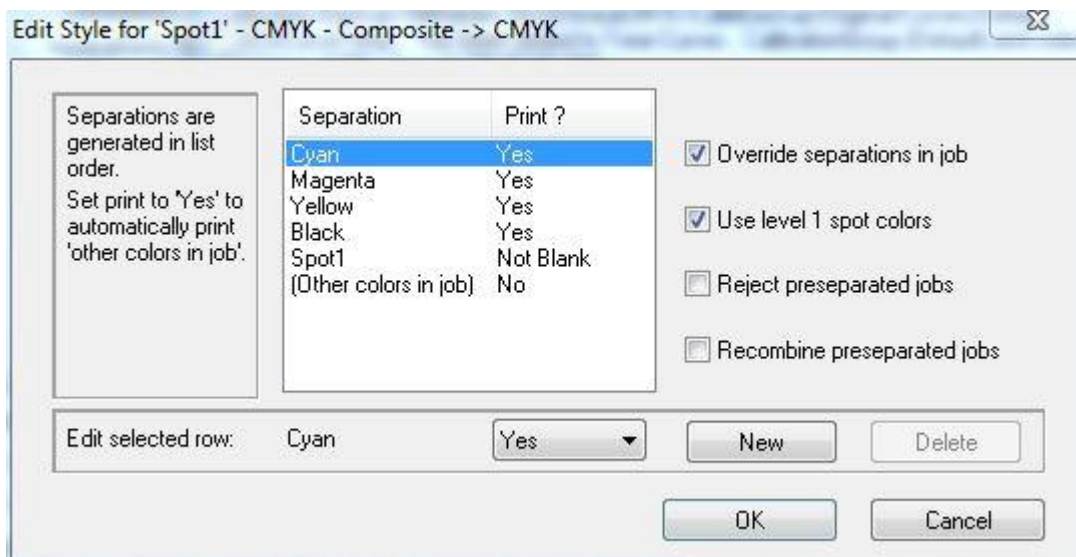
They may use the spot color edit tool to adjust the CMYK recipe for any spot color in the job. They can use the spot color edit tool to adjust the CMYKS recipe for any color named in the separation style.
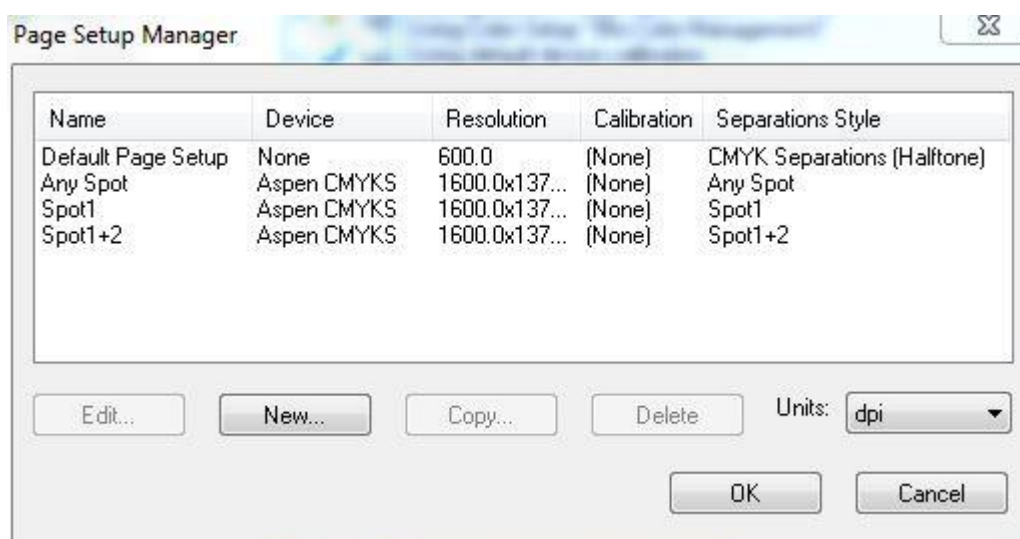
Again, if more than one name is used for the spot color used to print the "house color", you may alter the separation style to reflect that.
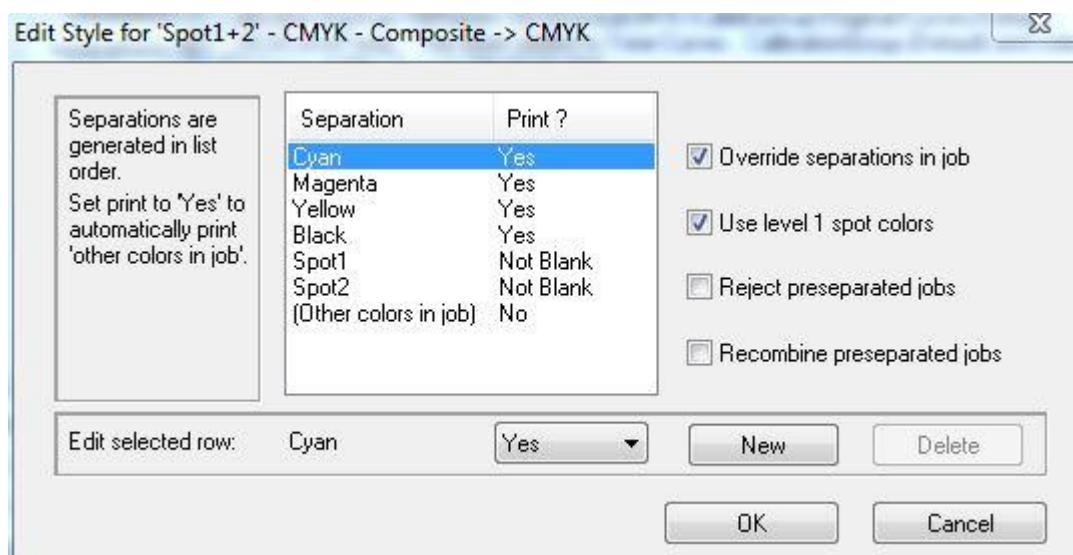
Recommendations on separations styles.

Your separation style list might look something like this:

This would give you the most flexibility.

As it indicates, "Any Spot" will allow any spot color onto the CMYKS channels. However, the only colors that will go onto CMYK-only are CMYK colors and spot colors which don't require recipe remapping.

"Spot1" and "Spot1+2" allow jobs with colors having those names to be mapped onto CMYKS channels. Other colors may be mapped onto any CMYK recipe.

It may be easier for your customer to understand if you pick and mandate a way to do this.

i.e. use either "Any Spot" or specifically named spot colors. The reference chart shows that all the possible outcomes are achievable with specifically named colors. If you must choose one method to simplify this for your customer, that is the one.
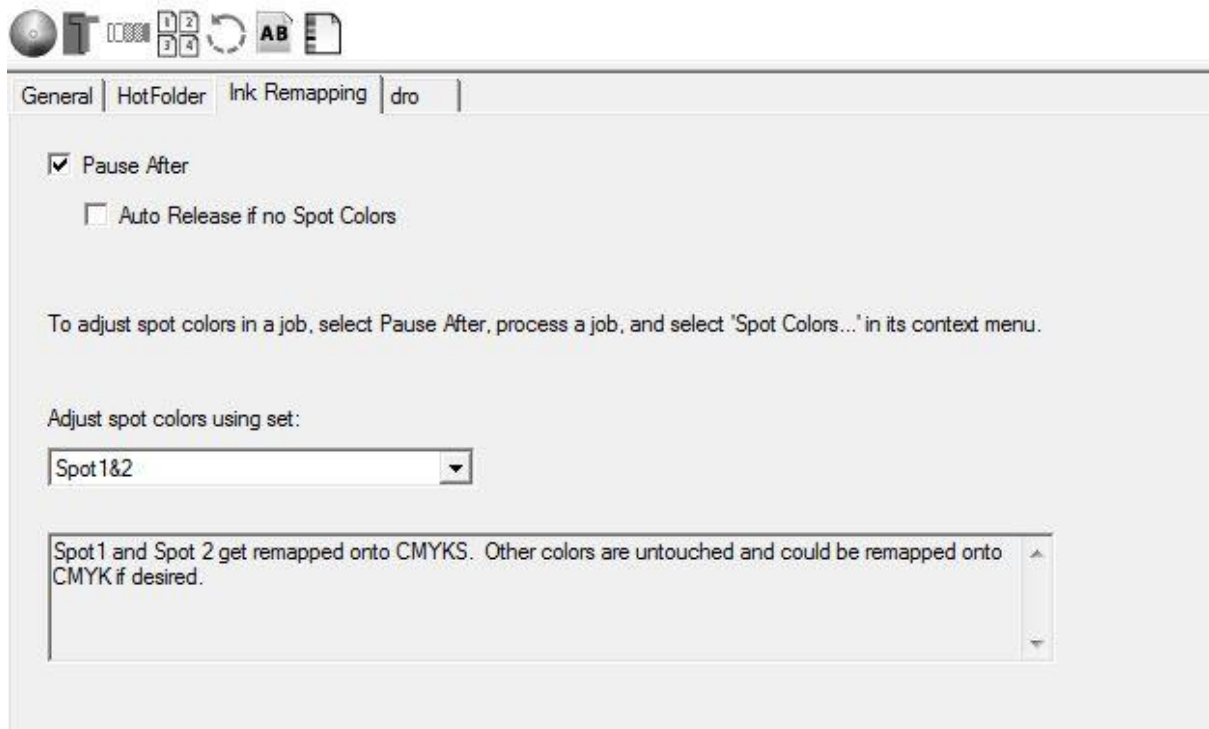
Possibilities with multiple spot colors and "specifically named spots".

What if they put more than one color name in the same job all the time?
Use a saved database. Do the remapping for those colors one time and use it automatically.
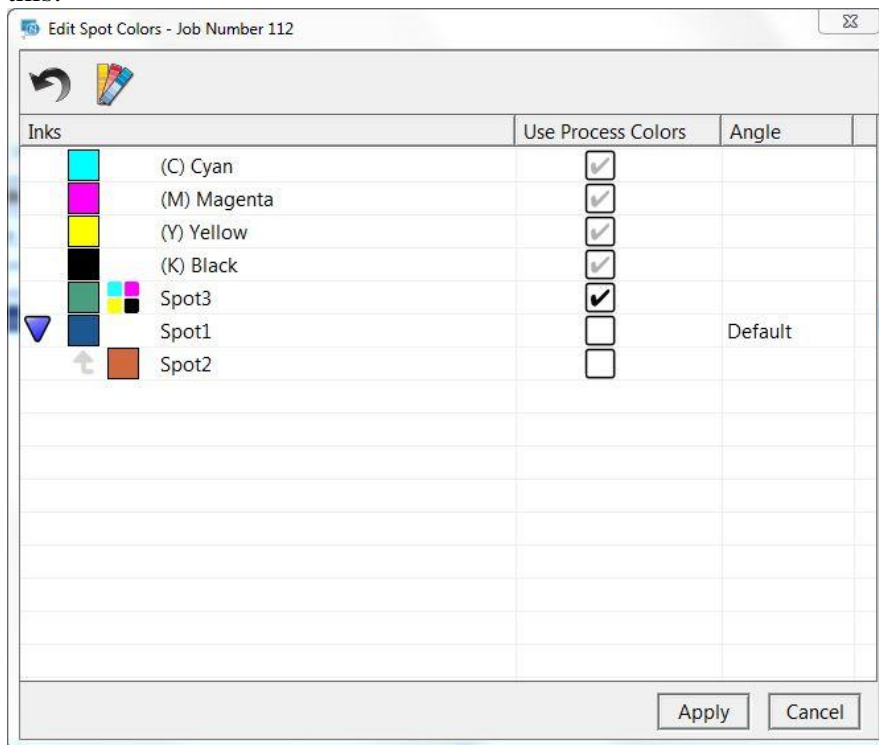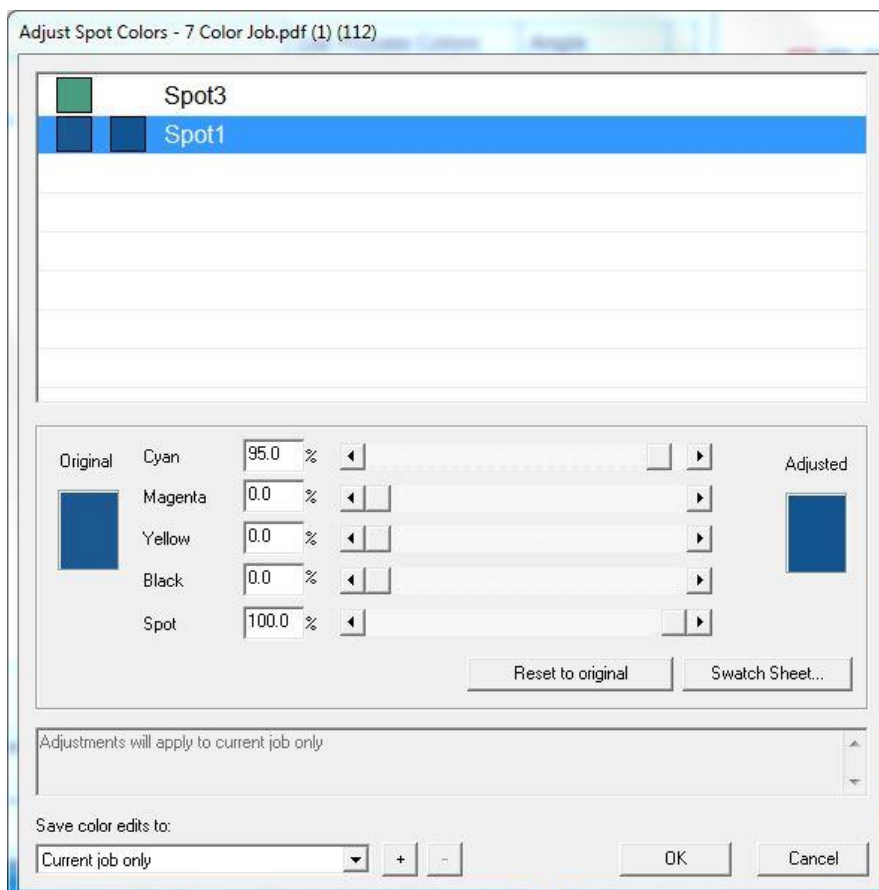After that, you only use remapping for CMYK -> CMYK mappings.

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You could also use the more complex UI for ink remapping and show the list of colors like this:

In this case I merged "Spot2" with "Spot1". Now I only need to map "Spot1" onto CMYKS and "Spot3" onto CMYK.

Appendix. INI file settings which affect separations.

Any CMYKS system must have the server ini file at %appdata% set to include a line item saying:

CMYKS_MODE=1

If that line is missing or if it is set to zero, you will not see the User Interface features which allow CMYKS mode.

The Aspen CMYKS RIP plugin may be set to error whenever there is no spot color included. This may be useful if you wish to ensure spot channel data is included in your job prior to printing. However, this may be annoying if you regularly print 4 color work to a press with 5 color planes. It is safe to leave this error condition off if you wish.   The RIP will create a blank channel for the spot channel so that it may perform KWS (Keep Wet Spit) maintenance as required.

To set the error condition on (To fail jobs with no spot data) make sure the Aspen Plugin INI file at %appdata% contains the line:

failnospotcolor=1

To set the error condition off add the line:

failnospotcolor=0

If the line item does not exist the behavior is the same as if it were set to 1.