SAASColourManagement.com

MANUAL

General User Guide

v2.3 - October 2016

xerox Business Innovation Partner

Automated Colour Control

cmb

Available CMI Manuals to get background info around specific topics.

Of course it is the job of a software delveloper to create software what doesn't need a manual. Correct but for a user who never started a colour management workflow it is very useful to be guided to success. No need to read at once one big manual but a manual about each part.

Download these manuals via the Service Page / download page visual

Use of SaaS Service	
Basic User Guide	How to set-up first workflow of SaaSColorManagement.com.
ColorPort	How to measure targets with ColorPort. (part of Printkits)
i1Profiler	Ho to measure targets with i1Profiler. (part of Printkits)
Automated Colour Management	
Expert Manual	Installation inclusive background info of automated tasks.
Color Management tools in SaaS service	
Device Link	The use of Device Link profiles, inclusive Editor and Preserve.
Swatch Book	Shows the relation between CMYK and Colour. It is part of the Device Link manual download.
Hybrid Rendering	What it is and how to use (OBA, G7, Images, Perceptual).
Create a Source profile	Profile any CMYK offset press and simluate that output via digital print.
Curves	How to control black and the toner layers.
Quality Control	Understanding of the lean quality control system.
RGB workflows	How to control RGB source files and how to verify RGB input.
Neutralizer	Neutralize your grays in ICC via a special gray target.
Color Management settings of DFE/ Rip	
FFPS	How to set the color settings for a FreeFlowPrintserver.
Fiery	How to set the color settings for a Fiery.
Creo	How to set the color settings for a Creo.
PX140	How to set the color settings for a PX140 FX DFE.
490/980	TRC and ICC creations for a 490/980 (Perle).
Caldera	Caldera DFE is part of the IJP2000
iController	TRC and ICC creations for an Impika.
PitStop	How to use the Pantone libraries with PitStop.
Emtex	How to use ICC and Pantone libraries in Emtex.
Other	Generic method to color manage any printer
PrintKits with targets and xml files to measure	
DTP70	XY instrument. Inclusive ColorPort manual.
iO table	Robot works with iOnePro. Inclusive ColorPort manual.
iO table 2nd generation	Robot works with i1Por(2) Inclusive i1Profiler manual.
iOnePro	Handheld device. Inclusive ColorPort manual.
iOnePro2	Handheld device. Inclusive i1Profiler manual.
iSis	XY instrument max width 9inch/23cm. Inclusive ColorPort manual.
iSisXL	XY instrument max width 13inch/33cm. Inclusive ColorPort manual.
Special PrintKit	
Source Profiles	All kind of Source Profiles inclusive CMI ISOCoatedV2.
Test Files 11x17	Test files with images in RGB and CMYK and Pantone swatch book.
Test Files A3	Test files with images in RGB and CMYK and Pantone swatch book.
Verify RGB	Golden Job in RGb inclusive an RGB control strip.

Software Downloads

CMI-Agent	Windows only. This is the agteway in case of automation
ColorPort	Windows and Mac. This is the driver to measure offline or manual with X-Rite Spectrophotometers.
FFPS-Remote	Windows only. To control FFPS version 6-9 (Solaris) remotely (link to Xerox website)
i1iSis2NET	Windows and Mac. Application to set the correct IP-addres in the iSis2NET
i1Profiler	Freeware version to measure manual with X-Rite equipment

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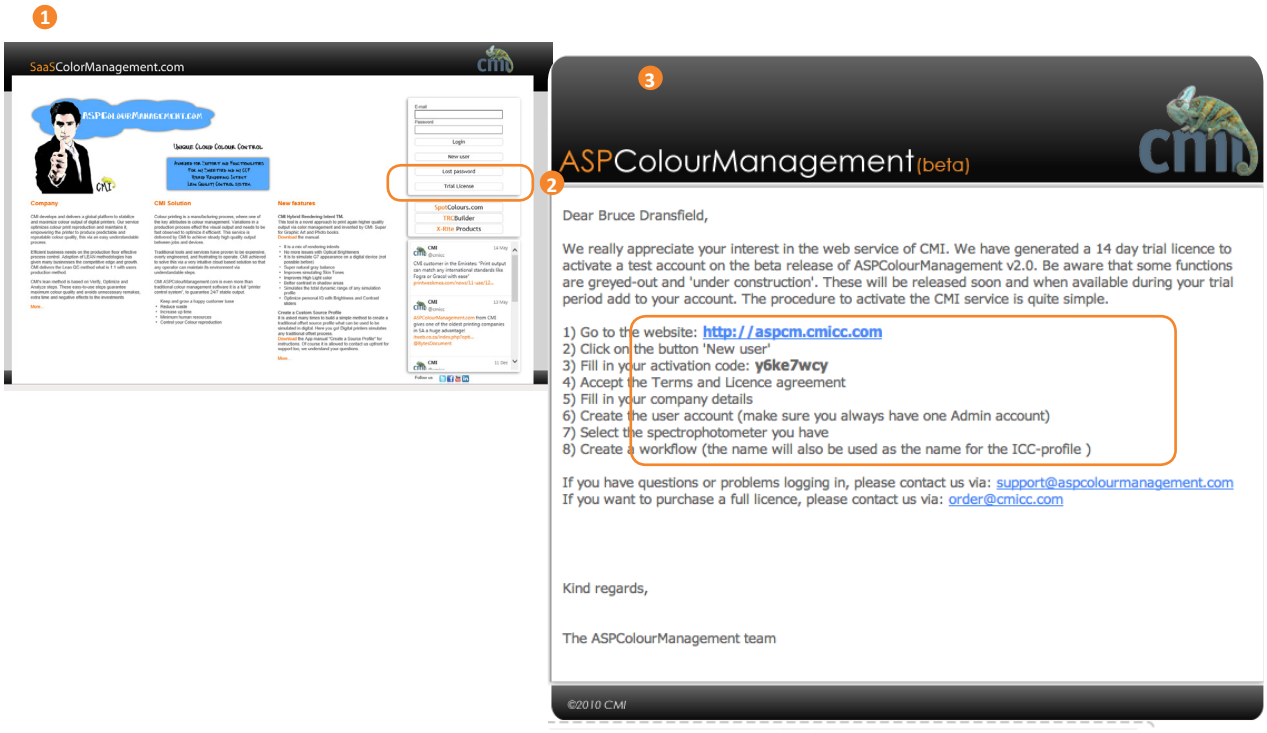
Chapter 1 Prerequisites

1.1 Minimum requirements.

- You will need a computer (mac or pc) with an internet connection
- A free USB port to connect a photospectrometer (spectro) if applicable
- You will have the rights so you can install software.
- You will need access to the flowing web site http://www.SaaSColourManagement.com
- For near line measurements you need an X-Rite Spectro or printer with Scan functions
  Supported Spectrophotometers. DTP70, i1Pro, i1Pro+i0 table, iSis, & iSisXL
  Supported Scanners: Top scanner of a printer with advanced functions or A4 or greater desktop scanner
- You will need an ACTIVATION CODE.

Activation Codes
- To use the cloud based solution you will need an account.
- To create an account you will need an activation code.
- You can create a “Trial/Temporary” activation code via the home page of the web site, go to; SaaSColorManagement.com
- Or you may have received an activation code from your CMI reseller. - If so skip to “Activating accound & Install Wizard.”

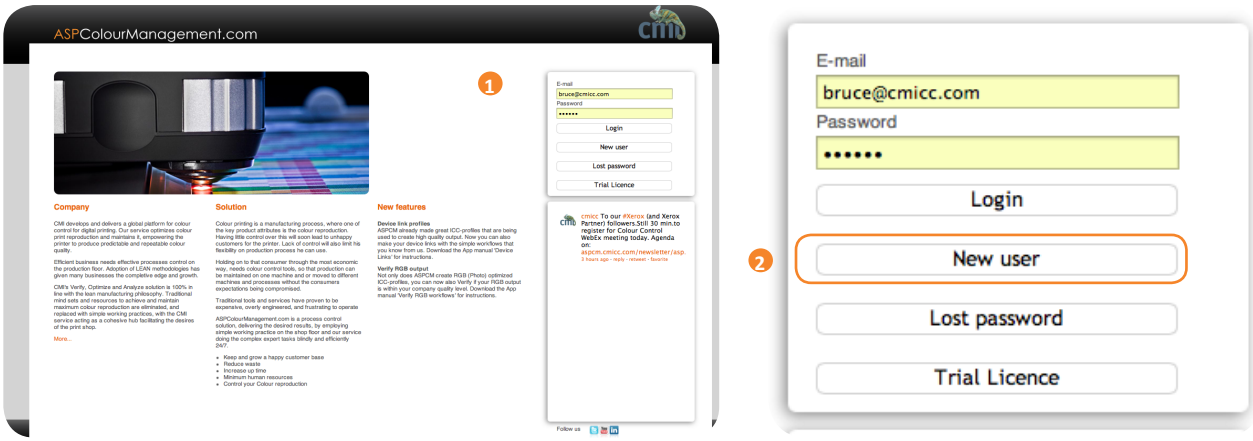
Getting a Trial Account
1. Open the web site SaaSColorManagement.com look to the right hand side of the home page.
2. Click the button [Trial Licence] and fill in the form.
3. After a few moments you will receive an email with your activation code.

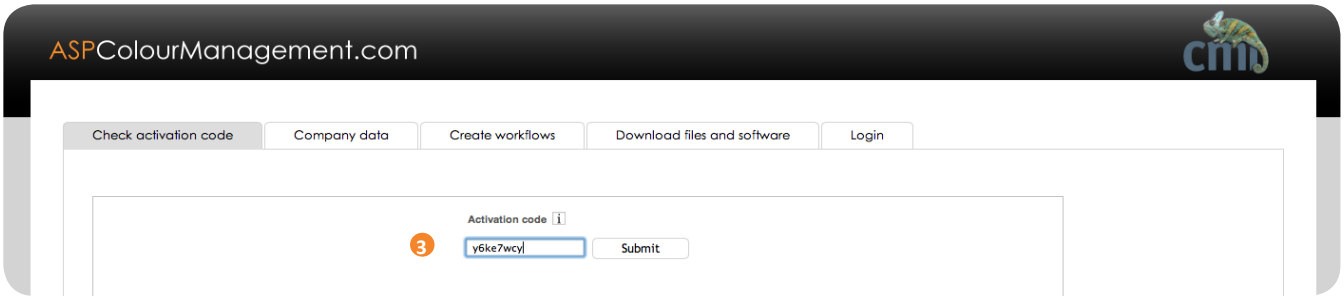


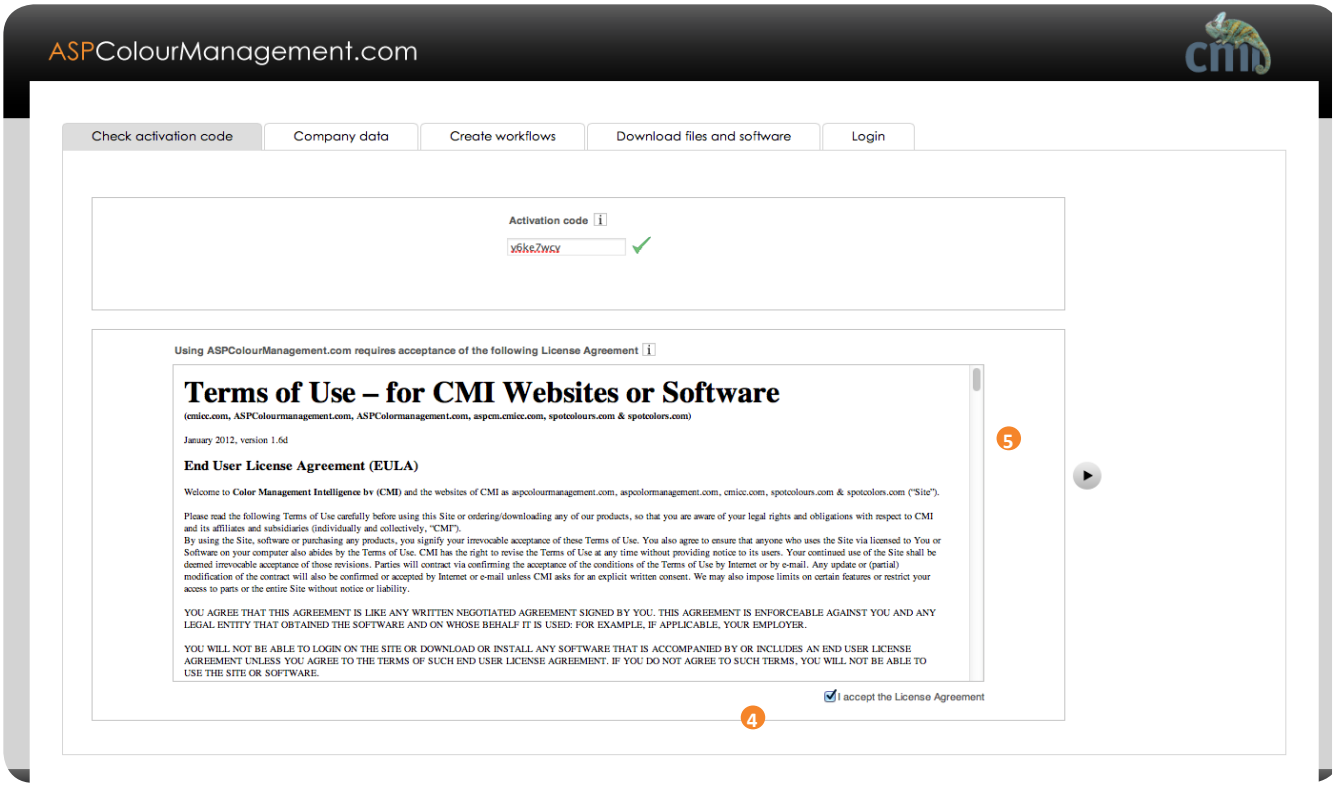
1.2 Activating Your Account & Following the Install Wizard.

Step 1. Check Activation Code Tab.

1. Open the website SaasColourManagement.com and look to the right side of the home page.
2. You will see a button with [**New User**]. Click [**New User**] and the account activation page will appear.
3. Enter the activation code in the area indicated and accept the terms and condition of the web site use**.**
4. Accept the Terms and Conditions of use.
5. Press the ▶ button to move into the set up wizard.

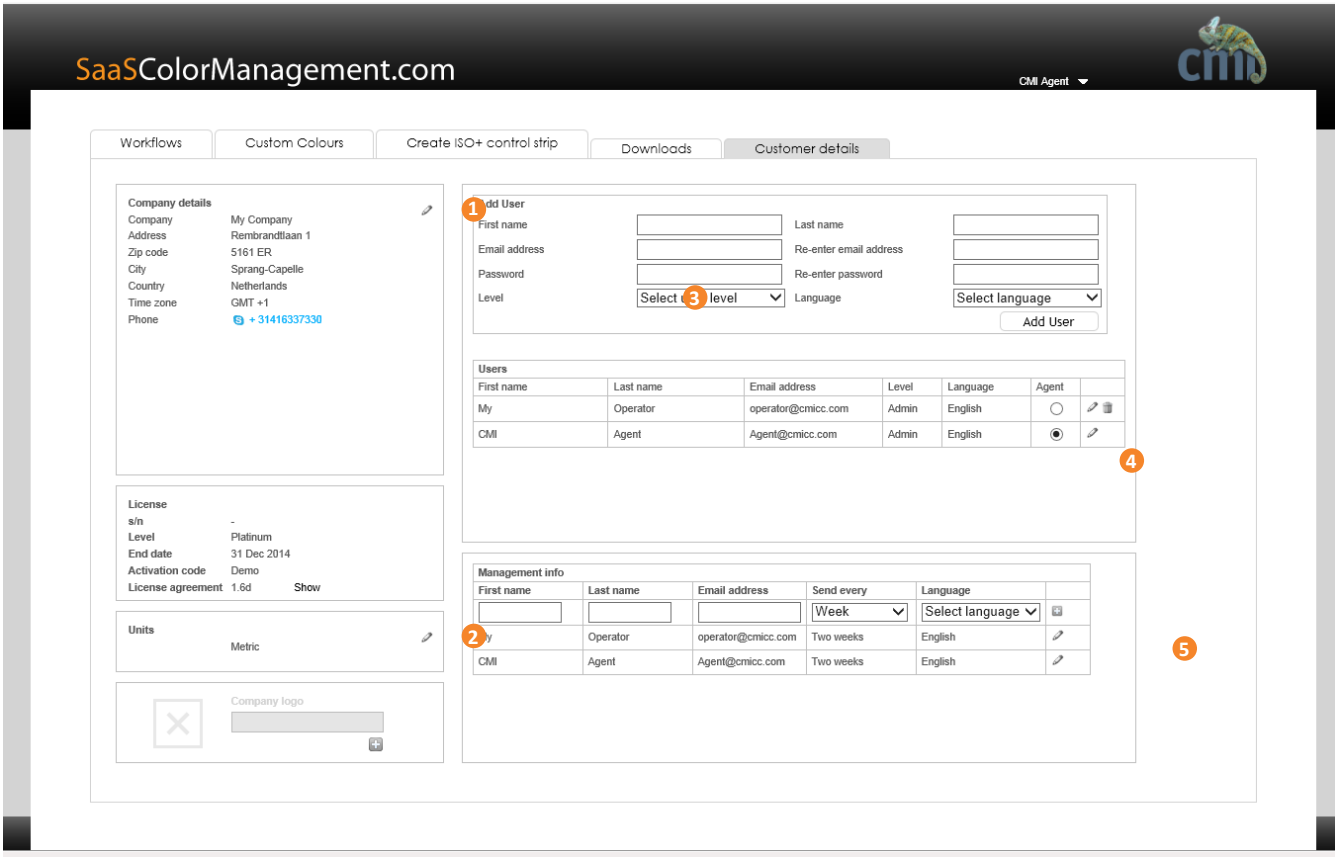






Step 2. Company Data Tab - Account and User Details.

1. Fill in the company address detail and click [**Save**].
2. Choose the measurements which are applicable to your region. mm or inch
3. Next add at least 1 Admin user. The email address will become your user login. You can add other users at this stage or add them later when your account is active.
4. If applicable in case of using a CMI Agent select which account may login as CMI Agent.
5. Admin users are automatically added to the **Management Information** email distribution list. The web site will send Management Reports to people with in this list. This too can be edited later when the account is active.
6. Press the ▶ button to move forward.



Step 3. Create Workflow Tab.

1. From the drop down menu choose the “SPECTRO” you will be using.
2. You must Create at least 1 “WORKFLOW”, (this can be edited later). More Can be Added later as well.

   Colour Workflow Defined:-
   [Name of Workflow] = Type of RIP + Print Engine + Reproduction Curve + *Application*

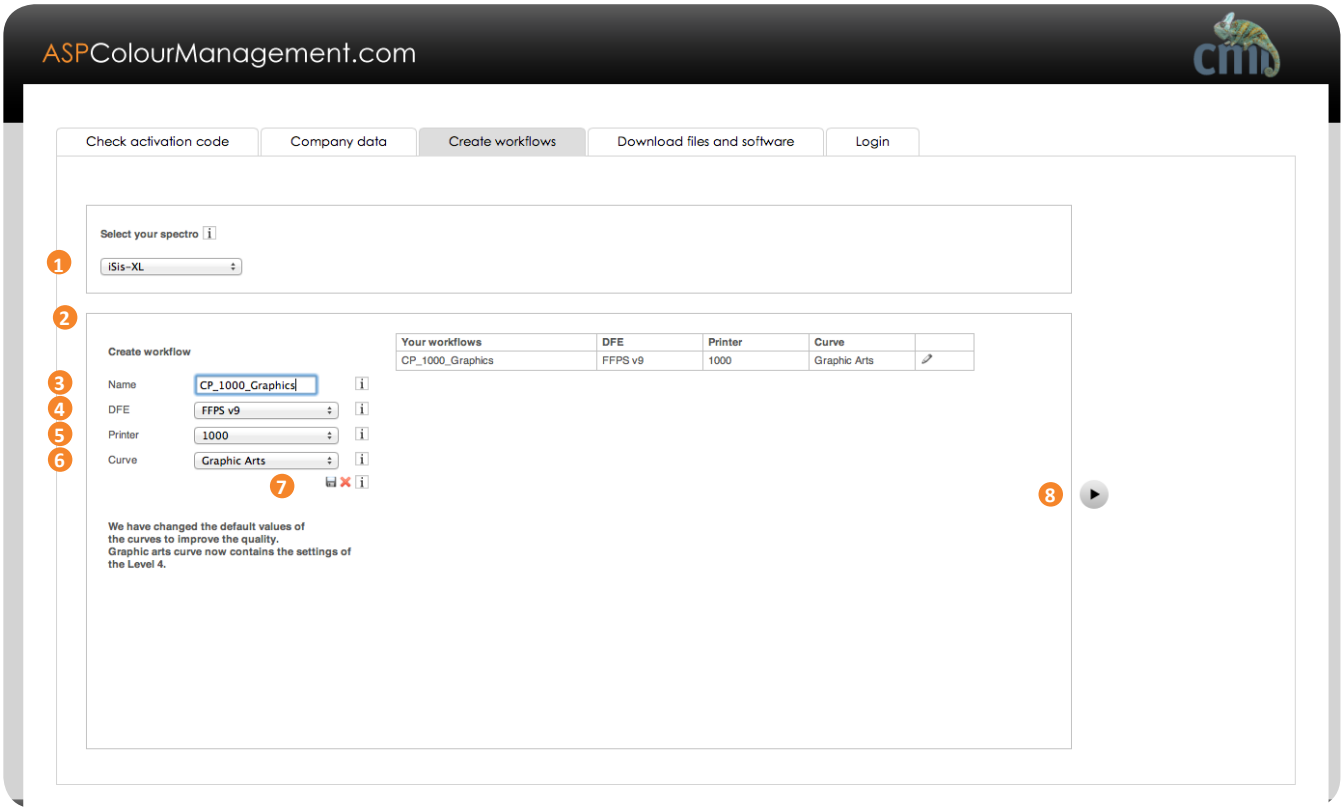
   You will have at least 1 x Colour Workflow per print engine.

   However the same print engine can have multiple workflows. E.G. The same engine might want optimizing for Graphics Arts work, and also Photo Books. in this case the engine has 2 very different applications and you would make 2 work-flows changing the reproduction curves.

NOW create a workflow by following this steps.

3) Enter a Name for the workflow.
4) Choose the RIP/DFE.
5) Choose a Print Engine.
6) Choose a Reproduction Curve.
   - For Beginners - Choose GRAPHICS ARTS for “Offset Look and Feel” or PHOTO OPTIMIZED for Photo book / RGB image printing. An in depth manual on curves is available in the download section of your account once you have created it.
7) Press **[Save]** and the workflow will be added to the list on the right side.

8. Repeat the process to add more workflows, when you have finished press the ▶ button to move forward.



Step 4. Download Files and Software.

1. Press **[Download all]**
2. Save all the downloads into a “Install” folder on the local computer.

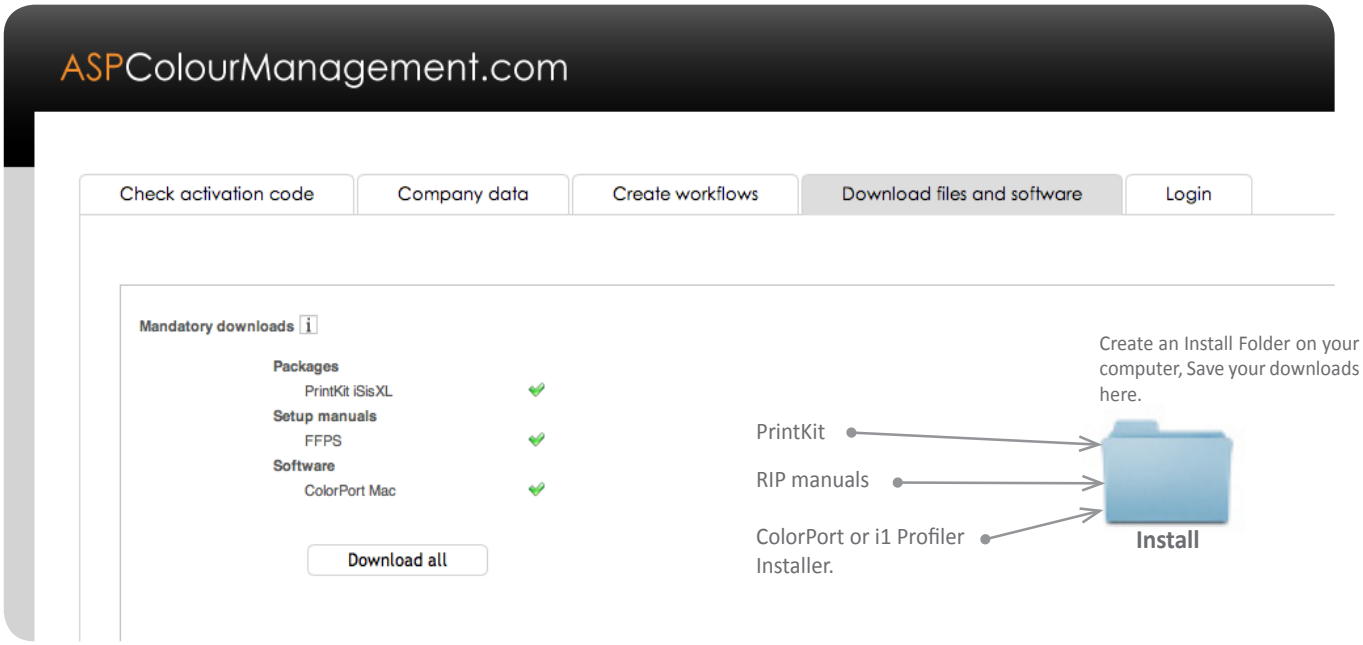
What is happening at this stage?

a). A folder called PrintKit will be downloaded. The PrintKit folder contains; PDF print files which correspond to Spectro you choose in the wizard, setup files, and a set up manual.

b). Set up manuals which correspond to the RIP(s) you choose in the wizard will be downloaded.

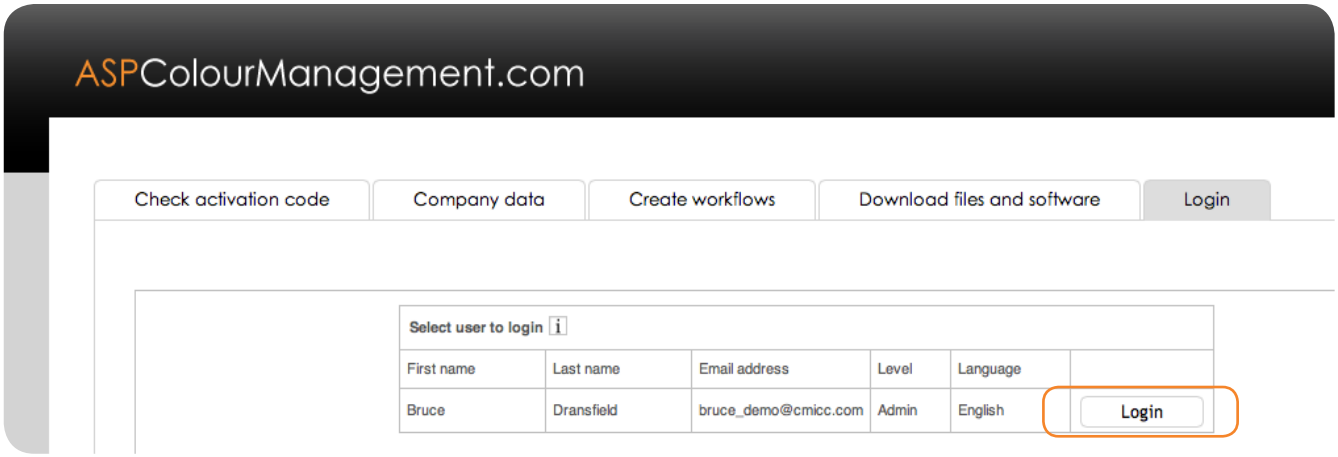
c). A set up application for ColorPort or i1 Profiler. The web site auto detects your O/S and depending on the choice of spectro, the website will download the appropriate X-Rite installation application.
This application will be used to drive your spectro so that readings can be taken, which will be up loaded to the web site later.

3. Press the button to move forward.



Step 5. Login.

1. Press **[Login]** and your account will open up.



Preparing the Local Computer - One time exercise.

Before you can use online colour management you must follow some one off set up routines so that the spectro can be used.

1. Unzip all the downloaded files in your install folder.

2. Locate the **PrintKit** folder, and follow the SET UP manual. (This manuals are Unique to the Spectro you are using). when you have successfully completed this your instrument should be ready to use.

Preparing the RIPs - One time exercise.

The DFE/RIP needs some preparation before you can start to colour manage it. The manuals downloaded to the install folder will guide you through this process. If you are unsure about this operation please seek trained advice.

Preparing the Digital Print Engines.

All digital print engines have a CALIBRATION process. You must know this process so that you can be successful with using your colour management and control tool. If you don't have this knowledge please contact your engine supplier for training.

If you followed all these steps you are ready to start to use the system. ✓

In case of automation.

- Download the Automation Manual what can be found in the download section under "Manual for".
- Download the CMI-Agent what can be found under "Software"

To find the download tab: Go to the expert page and find the tab "Downloads".

Quick Tip.

Print off the ColorPort or i1 Profiler manual. This will guide you when using the spectro for the first few times and remind you how to save the data.

Print the DFE manual, this will guide to load the profiles onto the RIP as you start to create them.

When starting to use these tools the 2 processes you must master these are OPTIMIZATION and VERIFY.

In the PrintKit folder you will find in the print files folder, the Optimization.PDF and the Verify.PDF, you need these files so take a look at them and make yourself familiar with them.

Chapter 2: Optimization Process

Basic concepts and goals. Printer Optimization

We refer to this process as **optimization**.

When an engine is calibrated, and ALL icc colour management is turned OFF, the engine could be said to be printing in its raw state. When we process the OPTIMIZE target file when the printer is in this state the resultant printed page could be said to embody the colour capabilities of the machine. When you read this sheet with your spectro and upload the results to the web site, the web site, takes this data and makes an ICC profile, this profile mathematically describes the colour capability of the printer (its gamut). This is then loaded onto the RIP or workflow.

Within the RIP or workflow you will choose a COLOUR WISH, this is referred to as a SOURCE Profile. e.g. IS_Coated_v2_eci. ICC . A source profile mathematically describes what you would like to see on the final production print. The combination of the source (the desired result) and the optimized printer profile, allows the printer to reproduce as near as possible, the desired result.

In case of automation.

Next steps can be used to set-up a manual workflow but not necessary. Download first the next items and continue with that.

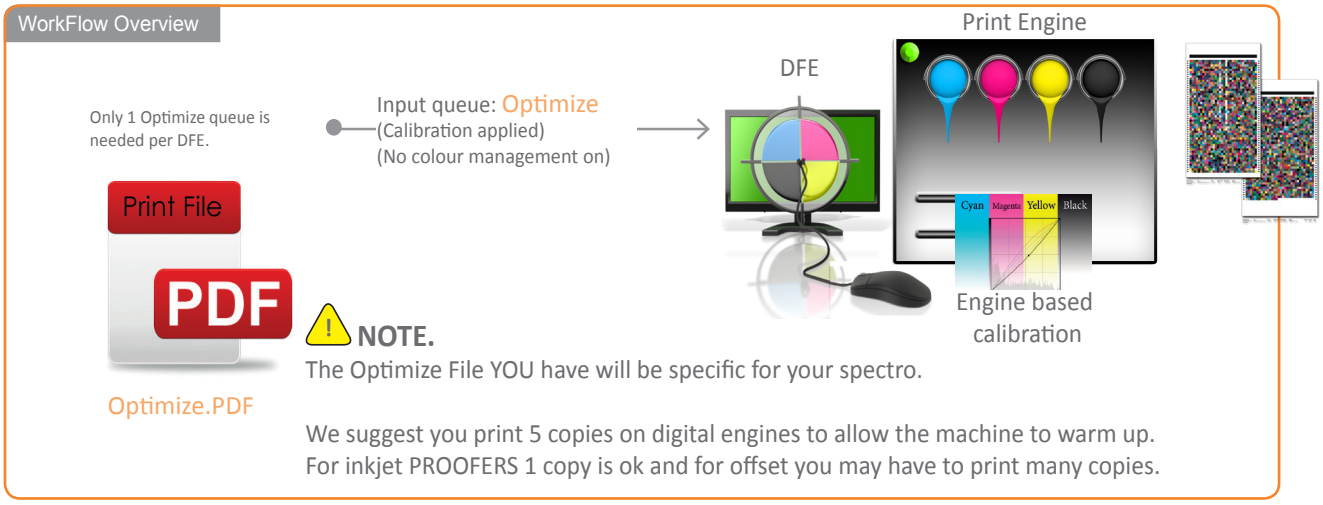
- Download the Automation Manual what can be found in the download section under “Manual for”.
- Download the CMI-Agent what can be found under “Software”

To find the download tab: Go to the expert page and find the tab “Downloads”.

2.1 First time Use. Optimizing the Printer for manual workflows.

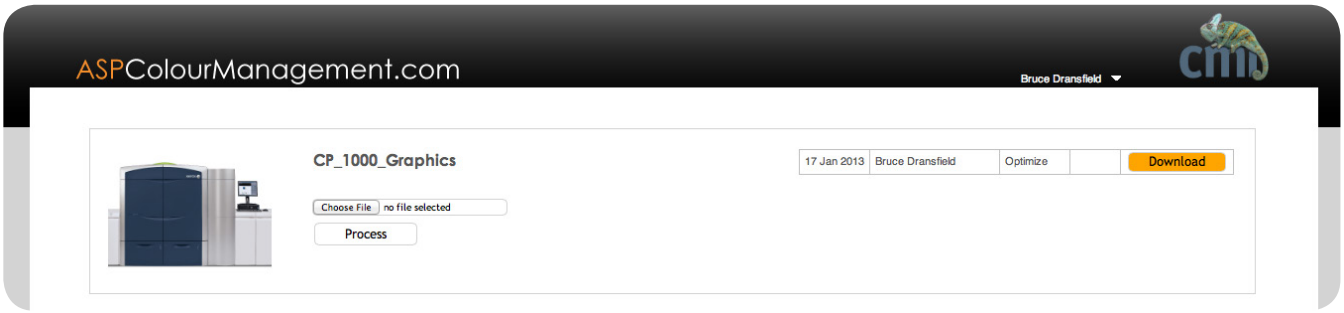
Step 1. Overview and Setup.

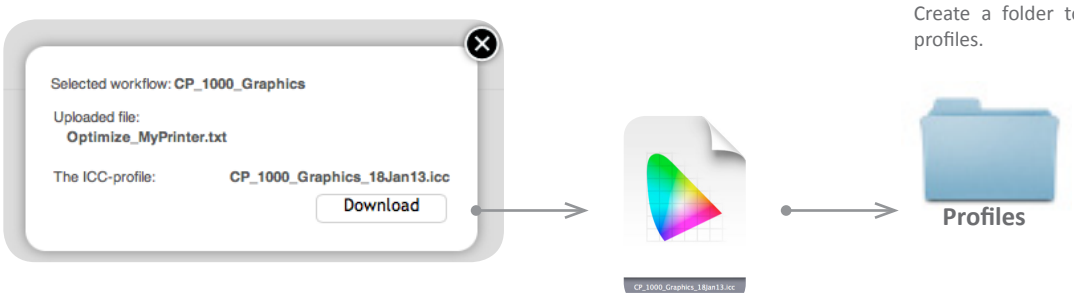
1. Once you have set up your DFE you will have a OPTIMIZE queue set up.
2. Calibrate the print engine. The calibration should be applied to the OPTIMIZE queue.
3. Process the **OPTIMIZE. PDF** through that queue. We suggest at least 5 copies are printed with digital engines.
4. Take the th copy and read it with your spectro as described in the Colorport or i1 Profiler manual.
5. Once read you will save the file containing the reading to the local computer.
6. Make sure the print engine is warmed up.



Step 2. Creating a Profile.

1. Login to SaasColourManagement.com.
2. You will see the workflow(s) you made in the wizard.
3. Locate the workflow for printer you are OPTIMIZING and press **[Choose File]**.
4. Browse the CGATS file you have made and select it.
5. press **[Process]**, the file containing your reading is uploaded to the website. You sound see the spinning wheel whilst it is in process.
6. Once processed, a high lighted **[Download]** button appears.
7. Download the profile to a “Profile” folder on your local machine, just so you know where they are.





NOTE.

The profile name is created by the web site, the name is a compound of the workflow name and date..

Step 3. Load Profile onto DFE or PrePress Workflow.

Once you have your profile you need to load it onto the RIP. Follow the instructions in the DFE manual.
Once loaded on the RIP you will create a production queue which uses the new profile, again the DFE manual will show you how to do this. If all procedures have been followed correctly, your printer is now OPTIMIZED.

Extra control with rendering intent
Part of the transformation in the DFE is to set the rendering intent. This set some rules how the source colour values will be process to the output separation values.

In the DFE you can use 4 options. Default from CMYK2CMYK is relative and RGB2CMYK is perceptual.

Absolute Colorimetric: Render the data as accurate as possible inclusive the used white point as defined in the source profile.
Relative Colorimetric: Render the data as accurate as possible but take the colour of the production paper as white point and use the relative colours as aims. So all colours are as Absolute minus the production white point. (When a bright paper is selected then all colours will be come brighter.
Perceptual: Compress the full gamut of the source profile into the output profile. This works fine when the source has a bigger gamut then the gamut of the production device. It doesn't not work good in the opposite thus when the source gamut is smaller then the production gamut use relative colorimetric.
Saturation: When the saturation factor is more important then the colour accuracy.

CMI Hybrid Rendering: This is a unique rendering style what is explained totally in a separate manual. It will overwrite the default relative and perceptual rendering styles.

Quick Tip.

Via Expert page / Download / Printkit for / of the web site you will find a set of Test files in CMYK as well in RGB. Print the test files before you optimize and once again afterwards so that you have a visual comparison. Also to understand what the effects are of a specific rendering intent.

Chapter 3 Manage and verify your colours

3.1 How a digital printer drives its colours.

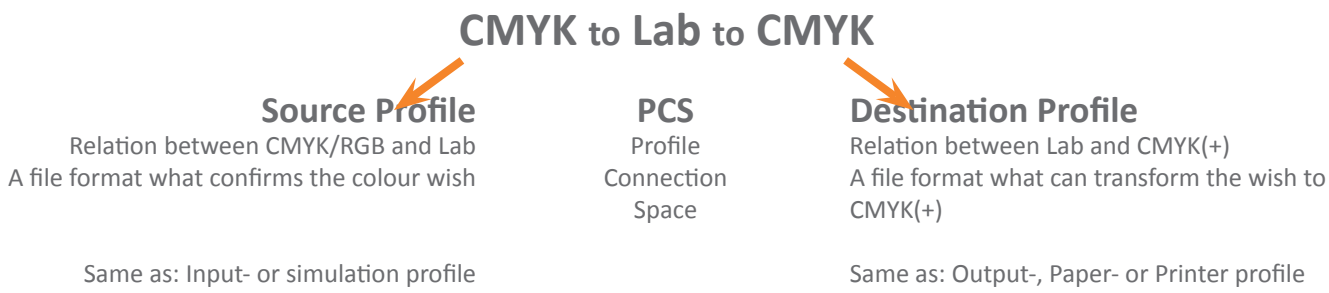
Colour management for a digital press needs to fulfil the colour wish set in the print job.
The print job can be created in CMYK, RGB and spot colours. The link to find the colour intent from these values or names is defined by the source profile for CMYK and RGB data and spot colour libraries for the named colours like Pantone.

The Output Profile is the characteristic of the production device or in different words it can guide the process to the best mixed values to simulate a specific colour. This colour information is set by the source profile or spot colour library.

So a colour management is a workflow from

Ink to Colour and from Colour to Ink

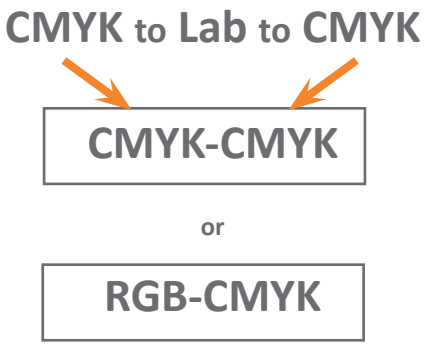
what is the same for a default colour printer as



In the process of transformation we have the extra option to set the Rendering Intent to optimise the output based on our needs. This more explained in previous chapter point 3.

Device Link Profiles

CMI is also able to deliver a Device Link profile. This is a single file what can do the same job as above. This helps to improve process speed and it gives the options to add some specialities in this file. To create this file we need the source profile, rendering intent and output profile of the workflow above to make from three items one file:



3.2 Basic concepts and goals. Printer Verification

The second goal is to maintain the optimized print engine. Via a lean quality control routine consistent and accurate prints can be produced. We refer to this process as Verify. CMI SaaSColourManagement is unique in how this is set-up. It can follow industry standard levels but aslo in house standards.
You set up the printer with your desired goal set in the source profile, rendering intent and with the CMI Optimized output profile. By printing the Verify.PDF, supplied in the PrintKit, reading the result and uploading to the website, you will be told how near your machine is to the desired goal.
By Verifying on a regular basis you will be able to track the “drift” in the machine. Once the machine has drifted too far you will repeat the optimize process to bring the device back in line. Therefore you now have a closed loop Quality Assurance method.

Default Quality Assurance. ISO 12647-2 - FOGRA 39L.

When a colour workflow is created, the web site sets you a quality assurance GOAL. The default goal is to measure against FOGRA 39L using the 12647-2 Norm. RIPs should be set with ISO_Coated_v2_eci.icc as the source profile when using this Quality Control (Q.C.) method. Please refer to the DFE for in-depth description of this set up.

For beginners, this means the digital machine is trying to emulate the look and feel of offset printing, and is a good starting point whilst learning the system.

Quality Assurance. IDEAlliance - GRACoL & Other International Standards.

The web site 100% supports other standards, their specifications and media wedges. However the default is FOGRA 39L. To change the Q.C., and have access to appropriate print files please refer to “Quality Assurance and Process Corrected Aims”, which is available in the downloads section of the web site.

Chapter 3 How to Verify Quality

To control colors on a Digital Printer is a color management function. The requested color defined by the source ICC profile (Goal) and is set in a relationship with the closest color in the printer ICC profile. Predictability and repeatability can be checked following the method below.

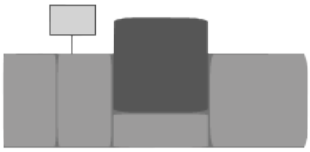
Goal (Source Profile)

Managing color on a digital press is based on simulation. The color information of the simulation is defined in a source ICC profile like ISOCoatedV2, GRACoL or sRGB or named colors like Pantone colors. Create your own source profile if standards
profiles are not in line or make exceptions on spot colors. See manual “Create source profile” or in Basic Setup, “Exception list” to optimize the simulation colors.

Printer ICC / DL Profile

The way a digital device can print the above defined goal is based on the physics of this device and the used substrate. The characteristic or DNA of that output is described in the by SaaSColorManagement.com created Output ICC- or Device Link profile. This profile is installed in the RIP / DFE of the digital printer. CMI Graphic Art profiles are based on accuracy and max gamut, Photo profiles are based on smoothness.

Physical Output



After all items in the queue of the DFE are defined and assigned in that workflow the total system will produce output. This output is the result of these settings as Source profile, rendering intent / color libraries, Rip Settings as image enhancement tools, Output profile, linearization curve and machine drift.

SaaSColorManagement.com works with several options to validate quality and check the difference between two outputs. The color difference between two colors can be calculated and the value we call 'ΔE’ (deltaE). ΔE helps to report similar (0-3.5), just noticeable (3.5-7.5) or a different color (>7.5). Select deltaEab for the arithmetical equation or DeltaE2000 to be more inline with the human eye. DelatEab ≈ 75% as the human eye will recognize the difference while DeltaE2000 is ≈ 95% accurate. Thus using DeltaE2000 needs different tolerances then DeltaEab.

3.1 Theoretical accuracy

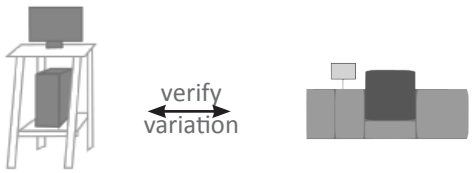
Goal ⟷ Output

The Theoretical ΔE is the physical difference between the Goal and the produced Output. It is the sum of the physical limitations, ICC profile transform errors, linearization and the drifts of the digital printer.
Theoretical because the aims are set by the Source Profile without any relationship to the limitations of the production printer. This method is also used by industry standards like Fogra and GRACoL. CMI gives the option to work with Theoretical Relative aims also known as “substrate corrected aims”. This helps to be lean to the production media.

Theoretical Absolute: 100% as Source Profile inclusive its profile white point. White point of production paper must be close to white point of source profile.
Theoretical Relative: The absolute aims are corrected to the white point of the production media. These relative aims or also known as substrate corrected aims and are a more lean method because it add a relation in the aims with the substrate.

3.2 Predicted / In-Gamut / Base2Profile

ICC/DL ⟷ Output



The Predicted ΔE is the difference between the given colors of the Printer ICC profile and the measured colors from a printed Output.
Predicted because the aims are given by the rendering intent tag of the printer ICC profile thus 100% In Gamut. This method is used to verify if the printed output is in line with the process what is defined by the expected color values given by the printer ICC profile. These aims are also known as 'Gamut Corrected Aims'. The Predicted ΔE shows the variation between the related color after transformation and hardware drifts. Predicted ΔE shows process variations and helps to analyze to if the error is a software error/ setting or a phyical hardware drift.

3.3 Measured / Consistency / Base2Base

Output ⟷ Output

The Measured ΔE is the difference between two printed outputs also seen as consistency. The aims are set by an average of measured results in the past and set as Baseline of the substrate. 'Measured' because the aims are set by measurements only. This method is used to analyze color drifts only. It is to confirm repeatability / consistency of the process.

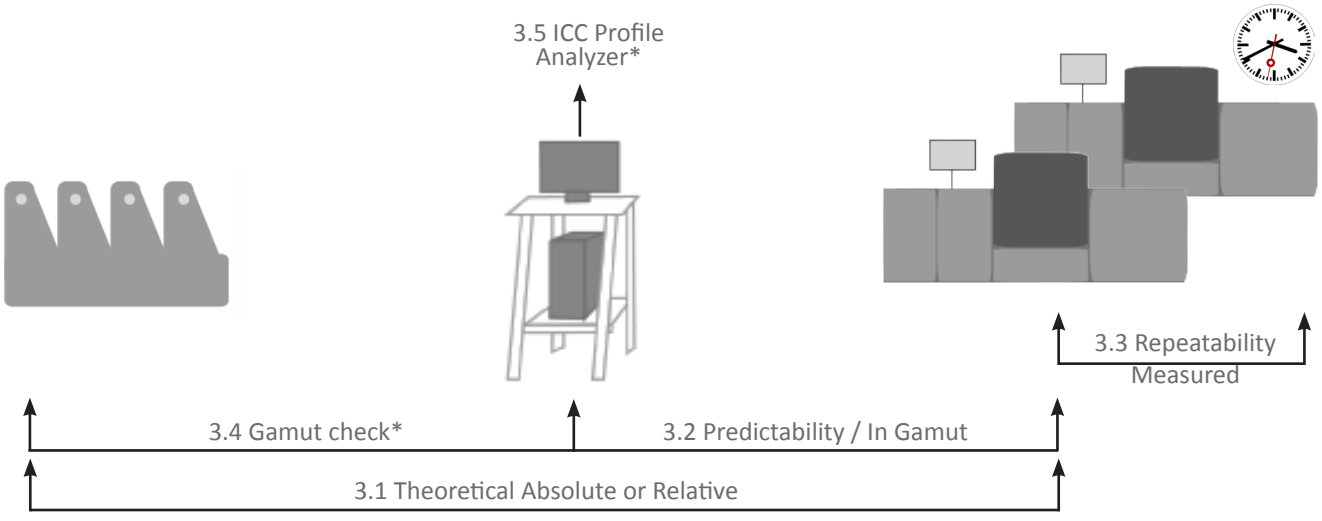
3.4 Gamut Check*

Goal ⟷ ICC/DL

The gamut check is useful to have an understanding of the difference of the gamut between the source- and the printer ICC profile. This can be also in 3D viaualized by a gamut viewer. It is not very usefull in our process because process variations can't be detected. This check is not part of CMI reports.

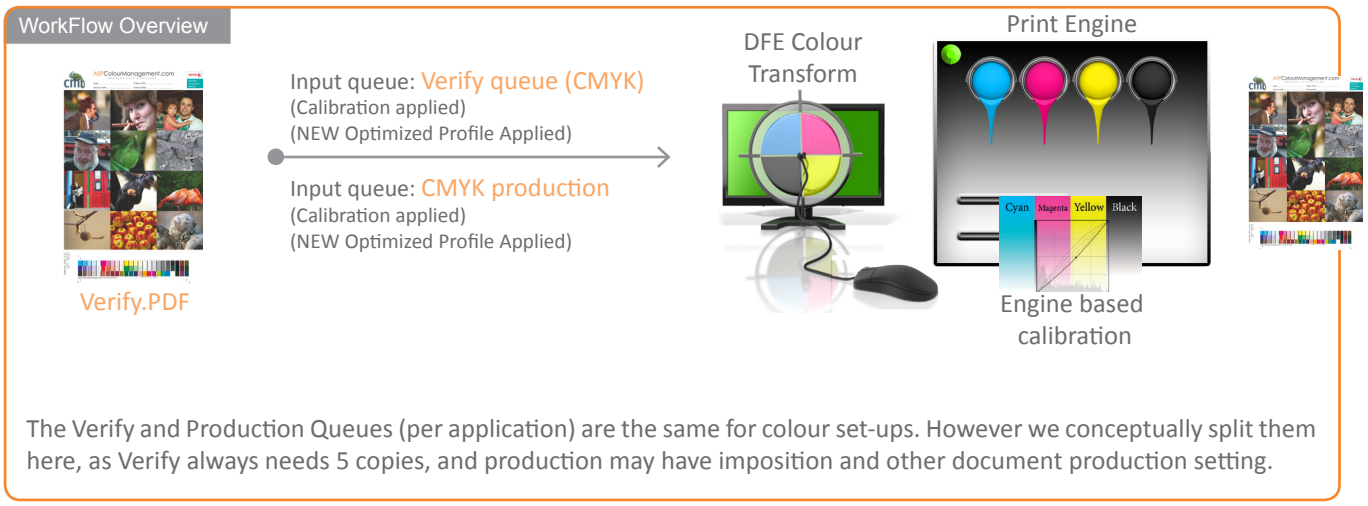
3.5 ICC Profile Analyzer*

The ICC profile is checked as stand alone file. The tables, round trip and gamut are analyzed. The results are stored in numbers for analytic actions between profile events. Not part of standard reports.



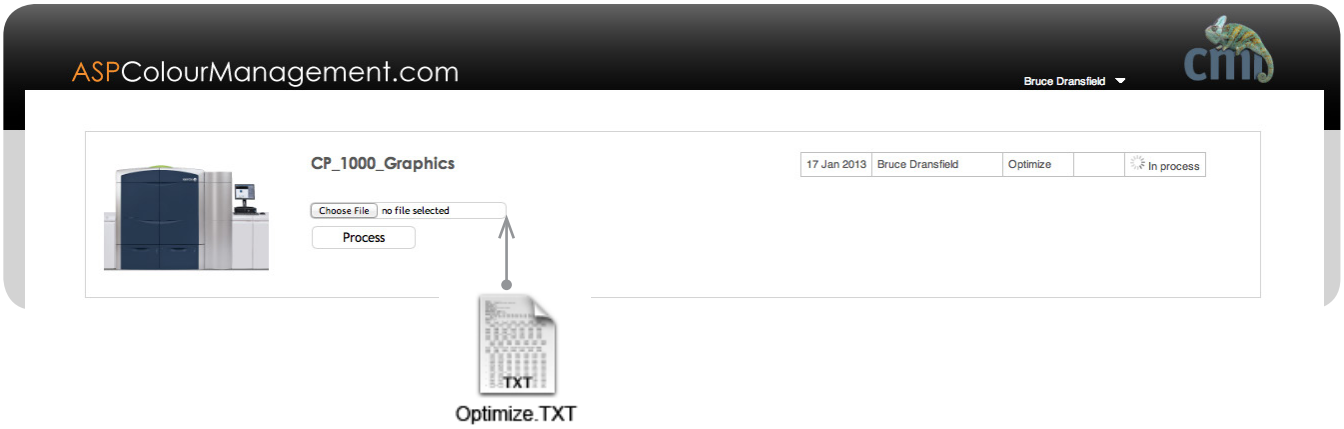
Step 1. Overview and Setup of Verification Process.

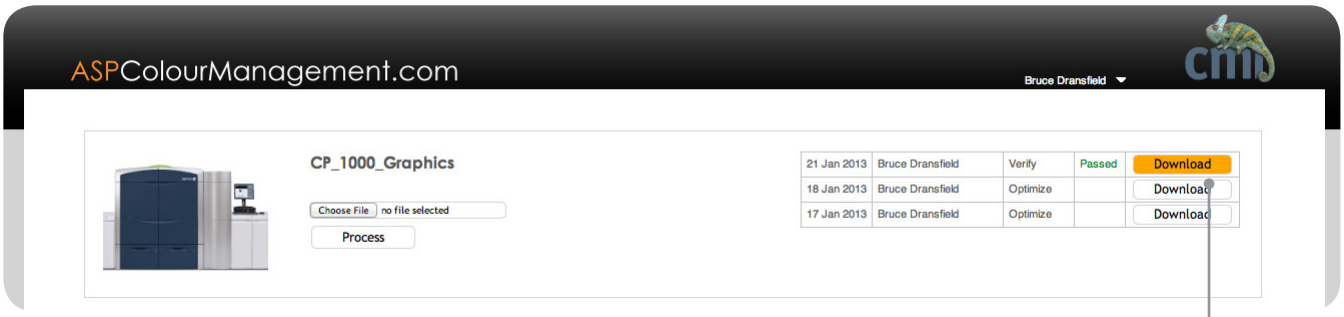
1. Once you have set up your DFE you will have a VERIFY or Production queue.
3. Process the **Verify.PDF** through that queue. We suggest at least 5 copies are printed with digital engines.
4. Take the 4th copy and read it with your spectro as described in the ColorPort or i1 Profiler manual.
5. Once read you will save the file containing the reading to the local computer.



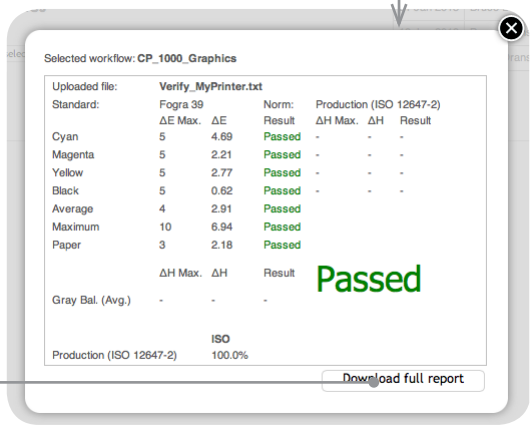
Step 2. Creating Your Verification Report.

1. Login to SaasColourManagement.com.
2. You will see the workflow(s) you made in the wizard.
3. Locate the workflow for printer you are Verifying and press **[Choose File]**.
4. Browse to the CGATS file you have made and select it.
5. Press **[Process]**, the file containing your reading is uploaded to the website. You sound see the spinning wheel whilst it is in process.
6. Once processed, a high lighted **[Download]** button appears.
7. You can see the summary report in the browser, and have the choice to see the full report as a PDF.





On screen summary report.



Full Report as PDF format.

NOTE.

Full explanation on quality reports are covered in the APP manual. *"Quality Assurance and Process Corrected Aims"*, which is available in the downloads section of the web site.

Chapter 4 TRC Builder (Tone Reproduction Curves)

Linearisation is the first step of stabalizing a printer. The TRC builder is not part of the standard license and need to be ordered as an extra option on top of a Platinum license.

The TRC builder in SaaSColorMangement.com creates curves for the Impika iControler.

In the TRC builder are controls to set density levels to control the gamut of a printer. This to optimize front/back or as cost saving.

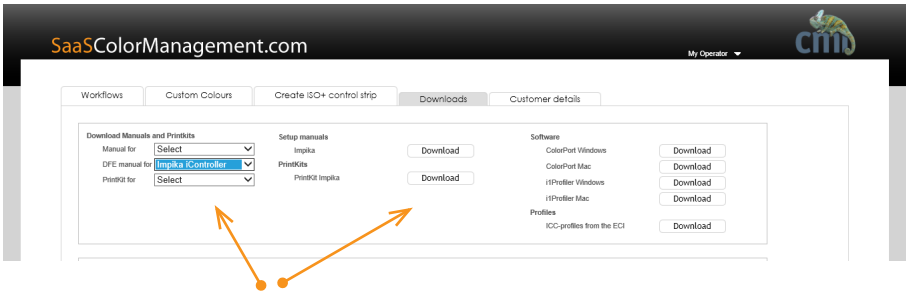
There two type of targets.

Full target incl. TAC test and Rank control what must be seen as default.
TRC curve for an A4 page

Targets.

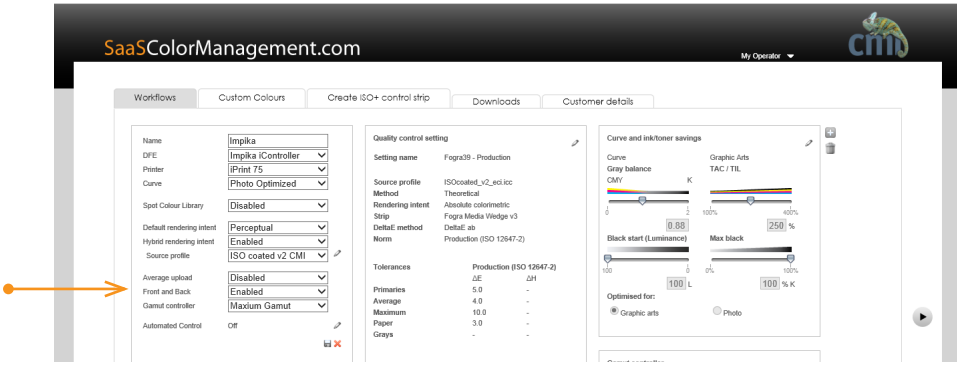
The targets are build for an X-Rite iSis or iSisXL spectrophotometer. The targets and ColorPort XML files are part of the instructions for the Impika DFE.

Go to Service page/ Download/ DFE/RIP section and select iController. The service gives access to the PrintKit of the iController.

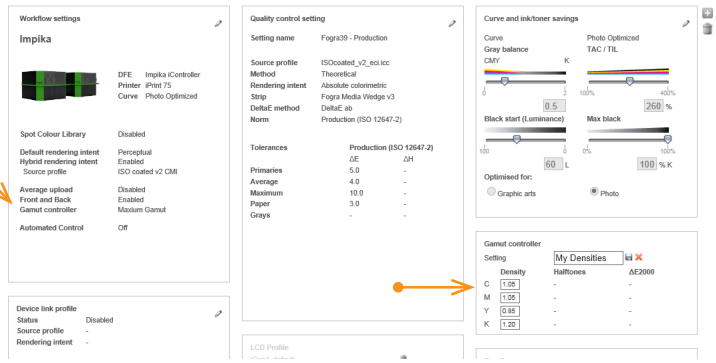


To balance Front and Back then this function needs to be enabled.

Enable: Front and Back



Create a density setting in the gamut controller. Give the list a name and save. The service will ask if this list must be used with your next upload or if already created edit the workflow setting Gamut Controller to you new created list.



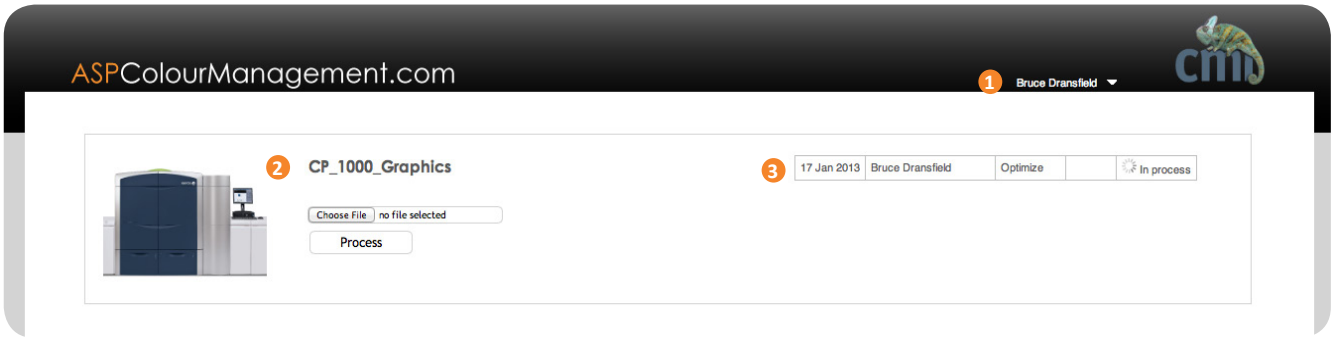
Max Gamut means that no clipping is used except the Back site will be clipped to the Front site if possible.

Chapter 5 Web Site Tour.

Overview - Home Page.

1. User Name, this is your email address, as set up in the Wizard.
2. Password.
3. Login.
4. New user, for setting up a new account.
5. Lost password button, just incase you forget.
6. Trial Licence, create a demo version.
7. Our Twitter Feed.

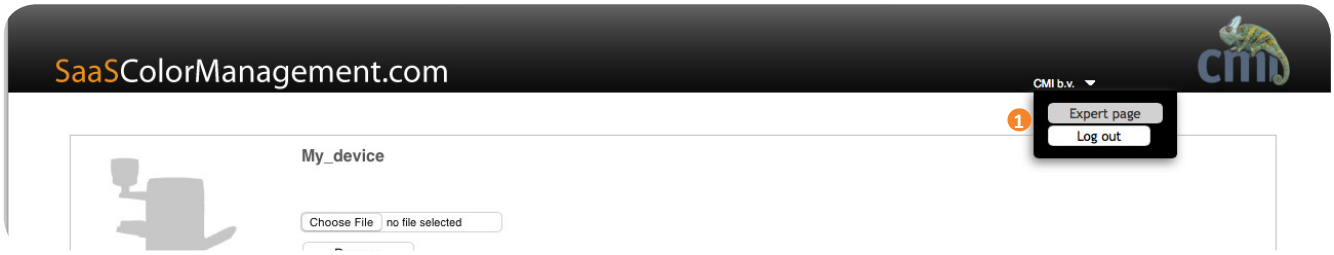
Overview - Operator Page.



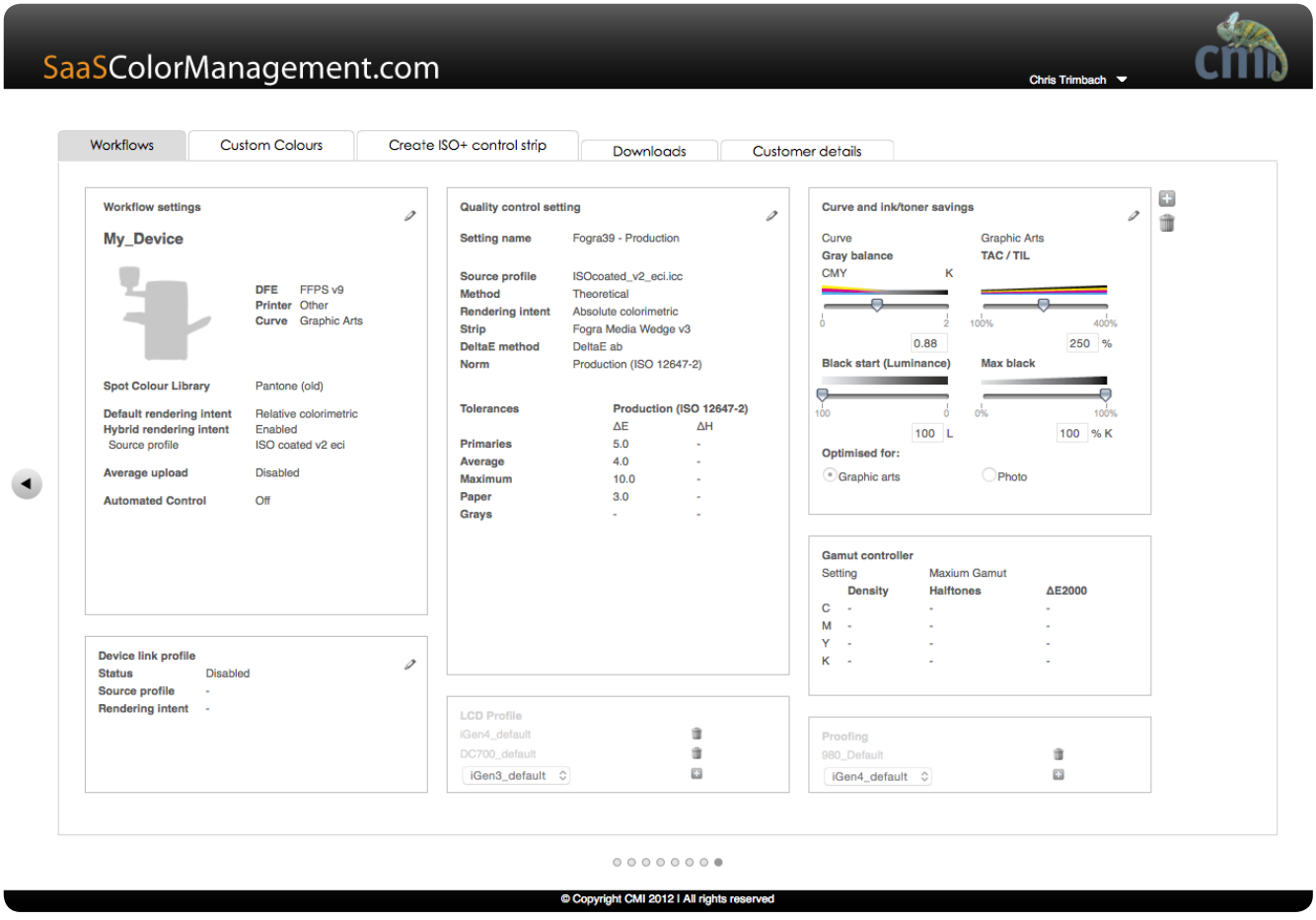
Once you login you enter the Operator Page. This is the location to do uploads or start tasks.

1. Your Account, click here to enter the Expert Page.
2. Workflow Name.
3. Downloads and activity summary. This shows you the last 5 operations in that workflow, a full history is available via the Download tab in the Expert Page.

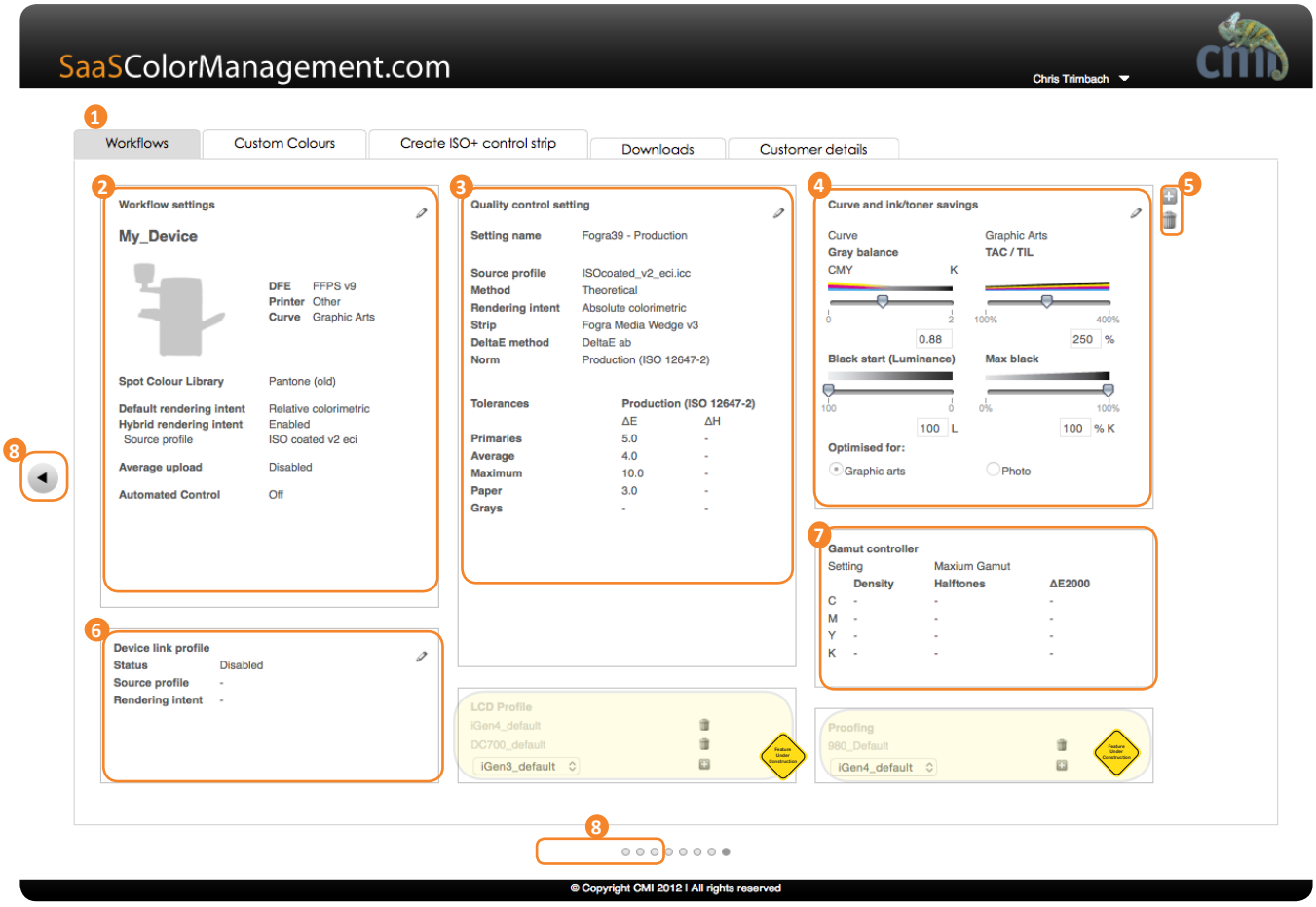
Basic overview - Accessing Expert Page.



1. Click on the Account Name, and choose Service Page. The Expert Page appears, with the [Workflows] tab selected.



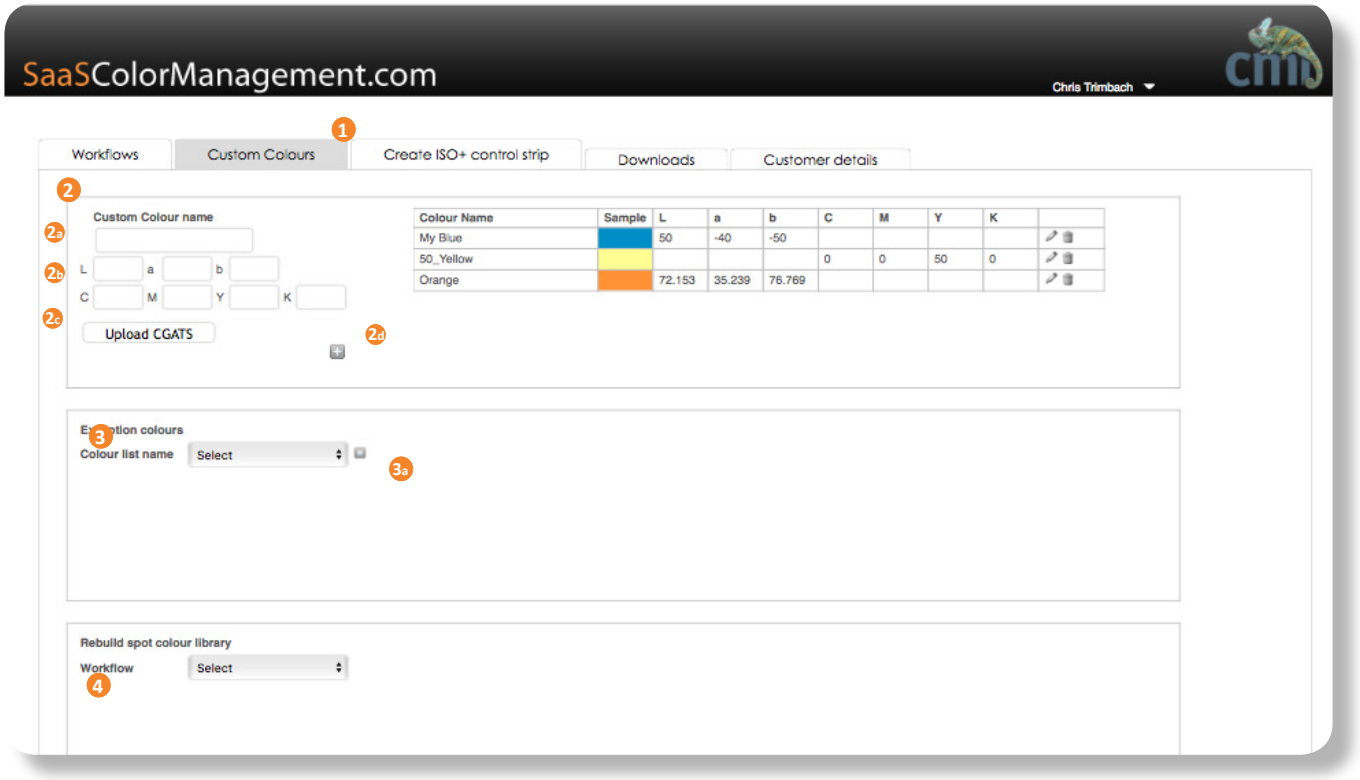
Expert Page - Workflow tab - Overview.



1. Grey tab indicates you are on Workflow page.
2. Basic workflow editor. Press to edit.
3. Quality Control editor / Process Corrected Aims Creator. Press to edit.
4. Reproduction Curve editor. Press to edit.
5. Add a new workflow press . Delete workflow press .
6. Device Link profile creator and editor. Press to edit.
7. Gamut Controller: To clip gamuts via the TRC Builder function
8. Navigation buttons, use to move to different workflows.

NOTE.
In depth explanations for all these settings will can be found in the downloads sections under the .APPs.

Expert Page - Custom Colours - Overview.



1: This part of the Expert Page can be used to create custom colours, make exceptions and create and install the libraries.

2: Creating any custom spot colour based on CMYK, Lab or spectral data from X-Rite i1Pro(2)

3: Creating exceptions on default spot colours as Pantone /HKS or custom spot colours

4: Rebuild a library for a specific workflow with or with our an exception list. In case of automation it will forward the library automatic to the correct printer DFE. The libraries are based on data from a selected workflow / project and calculated to the best separation values with the lowest predicted DeltaE2000.

All spot colours (or named colours) will be saved as a library following the specifications of the chosen DFE and optimized based on the uploaded measurement data. Not all DFE's work with libraries in such case the system will deliver a PDF with separation values and the predicted accuracy via a deltaE2000 value. Enable "Spot Colour Library" in the workflow settings of that specific printer and each time when a new ICC profile is created all libraries will be optimized based on the total available list of named colours.

Create a new custom spot colour

2a Fill-in the name of the spot colour.

2b Specify the reference Lab colour values or fixed CMYK separations. Lab colours are recommended to keep the output colour stable between printers. When it is set to fixed separation values the element will always be "inked" with these separations, the colour will vary based on the characteristic of the printer and the used media.

2c When the Lab value is unknown measure the reference swatch with a spectrophotometer in D50/2.
The sample colour to reproduce can also be measured with an i1Pro(2) / ES2000 handheld (minimum patch size is ø 5mm), Load for the i1Pro2/ES2000 the workflow for i1Profiler named "Spot-Measurement_i1Pro2.rwxf" as part of the i1Pro2 Printkit or for the i1Pro the ColorPort xml "Spot-Measurement_i1Pro.xml" what is part of the i1Pro Printkit. This spot colour target is so created that it asks to make four measurements of the reference swatch then save this as standard CGATS and upload the measurement data via this option. The service will make an average of the measurements and set this as new reference Lab value for this spot colour. (See colour Orange)

2d When all items are set click on the add sign (+) and the colour is added in the list.

3: Exception lists: Works with all colours part of the default- and custom spot colour list.

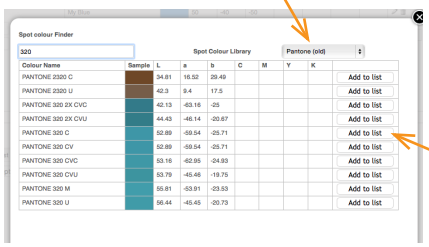
Because of the variety of print processes it can be that a specific spot colour reference is different as defined by the original reference data (as saved in the CMI database). As example: A Pantone colour printed different in offset then the original swatch book looks.

This unique exception list option is a powerful tool to change spot colour reference and calculate the best separation values for it. The exceptions can be connected in the workflow so that with a new task this exception list is also used on top of the default. No limitations for the amount of exceptions and exceptions lists. Before an exception can be made the spot colour must be part of the available custom colour- or default Pantone colour lists.

Create an exception list (see number 3 & 3a of image above)

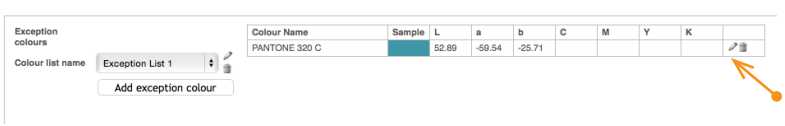
a. Click on add to set the name of the exception list and click on save.

b. Before the spot colour can be add in the exception list select the correct Pantone colour library (Old or Plus) to be sure the correct original reference colour is used as start value. This because the same name is coloured different in these two books.



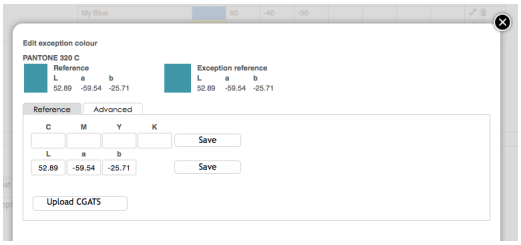
c. The system will show all names with the given name or numbers from the list, when the right colour is found click on “Add to list” behind the name. The button “Add to list” is gray in case the colour is already part of this list. Close this option via the cross in the upper right corner.

d. The colour is now showed with the name, a sample of the colour and the reference data.



e. Behind the line find the edit button (pencil) to make the exception for this colour.

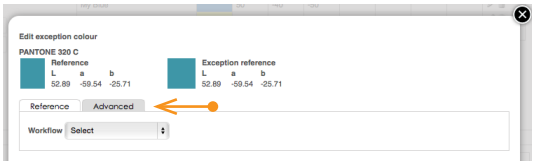
f. 1st tab “Reference”



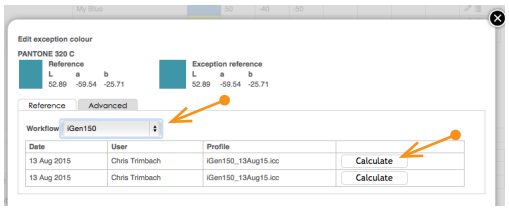
To set the new target colour of the exception reference use: CMYK values, known Lab values or upload a CGATS file of the sample to reproduce. When the Lab value is unknown measure the reference swatch with a spectrophotometer in D50/2 mode or upload a CGATS (see 2c above)

g. When the new value is saved the used exception reference data is showed right next to the original reference data. (The showed colour is only for indication). The exception list can now be used in your workflow. With a next upload of an ICC /DL profile these exceptions will be add in the library or use the function to create the library direct with the lowest section (4) of this page.

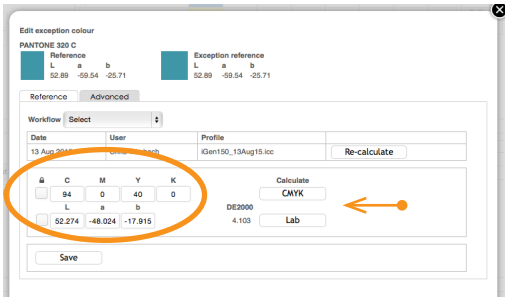
h. 2nd Tab: Advanced



This advanced option can be used to calculate and set the exception colour based on data of a specific CMI workflow. Connect your colour to that specific workflow. All actions are showed so that also an earlier gamut/setting can be chosen. When selected the option calculate appears to calculate the accuracy between the reference values and the predicted Lab values, the CMYK as well 5 colours separation values if applicable. The DeltaE2000 values shows how close it is from the source reference or the set exception Lab colour value. This to analyse the effect of your printer, ink set and media or to

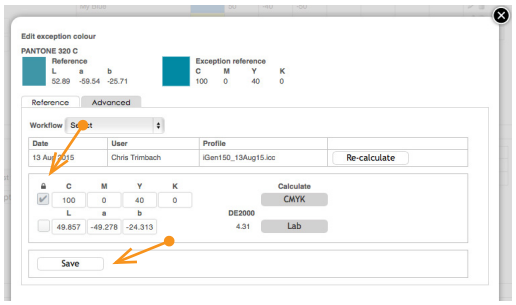


switch to different specifications and understand the differences. Change Lab values to get new separation values inclusive the predicted Lab (In Gamut) or change the separation value and calculate the new predicted Lab value's with the DeltaE2000.

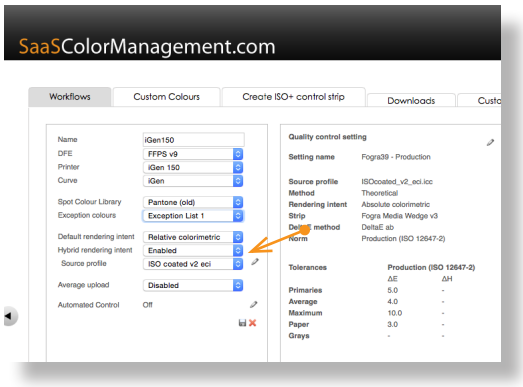


e. When the correct values are achieved for CMYK or 5 colours, lock the separation or Lab value of that process. Now the other process can be optimized or save it as exception for CMYK as well 5 colours. The Lab reference colour can now be totally different for the CMYK and 5 colour library. When 5 colour separations are set and a different ink set is chosen then the system will calculate with the predicted Lab values of that separation.

In case a five colour separation is locked, example CMYK + Orange (C15,M15,Y0,K0,O85) the system will recalculate the best separation values in case a different ink set is used. Example CMYK only or CMYK + Green. The system will use the predicted Lab value from the locked separations to calculate the new best match with this ink set.



f. Use the delete function (trash) behind the line of the spot colour to take this colour out of the exception list.



When the exception list is saved it can be used also in all standard workflows.
When the task of a new ICC / DL profile is finished it will be visual via the download button that the exception colour list is part of this task.
In case of automation the CMI-Agent will overwrite automatic the libraries with the exceptions.

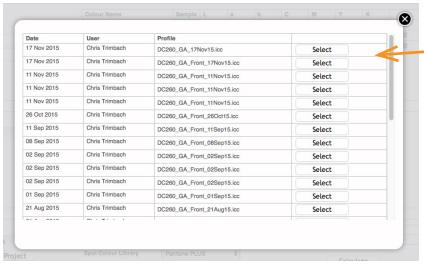
4. Rebuild a Spot Colour Library

Without uploading a new ICC target the system can rebuild a spot colour library based on a previous task. This to increase flexibility and time to be in specifications. Via easy steps the library will be created and uploaded to the DFE in case of automation or is ready to download.

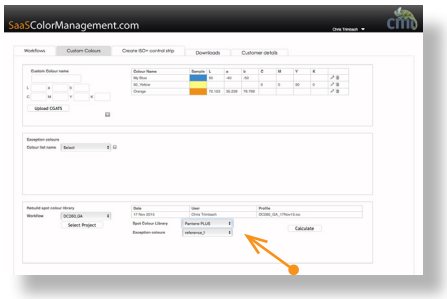
Step 1. Select the correct printer workflow in the "Rebuild spot colour library" section.

Note: In case of automation the printer and CMI-Agent must be online to show the previous tasks.
From manual tasks all ICC actions will be listed after a workflow is selected.

Step 2. Select the corresponding workflow to rebuild the library



The system will use the data from a previous task to rebuild the library.

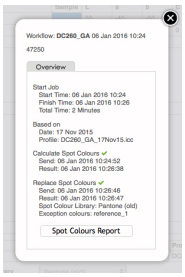


Select the correct Pantone Library (old) or “Plus” and if needed an exception list.

Start the task via the “Calculate” button.

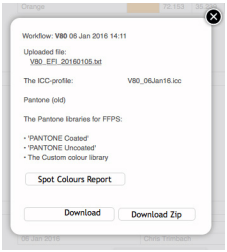
In case of automation the library will be uploaded automatic to the DFE, in case of a manual workflow the library can be downloaded.

Step 3. Open the download button

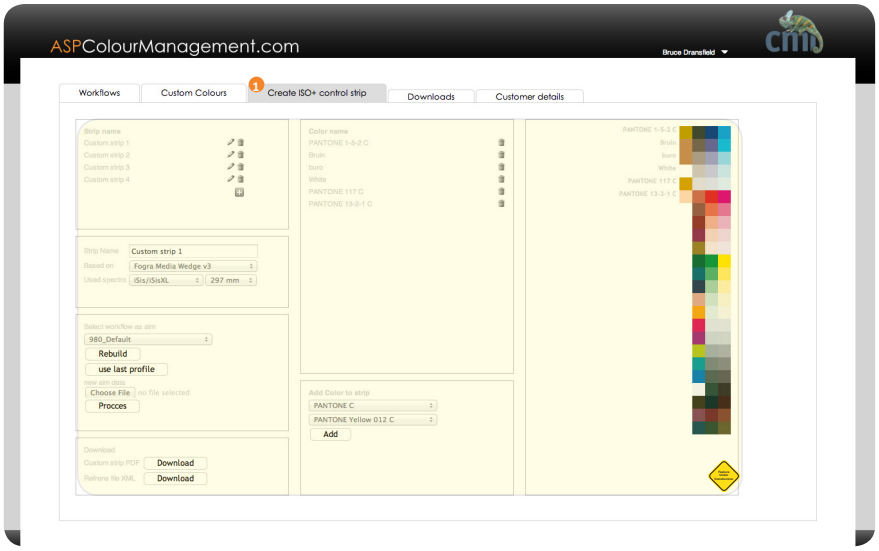


In case of an automated task the system will show the done steps. The report will show all separation values.

In case of manual process
The results can be downloaded and needs to be forwarded to the DFE/ RIP

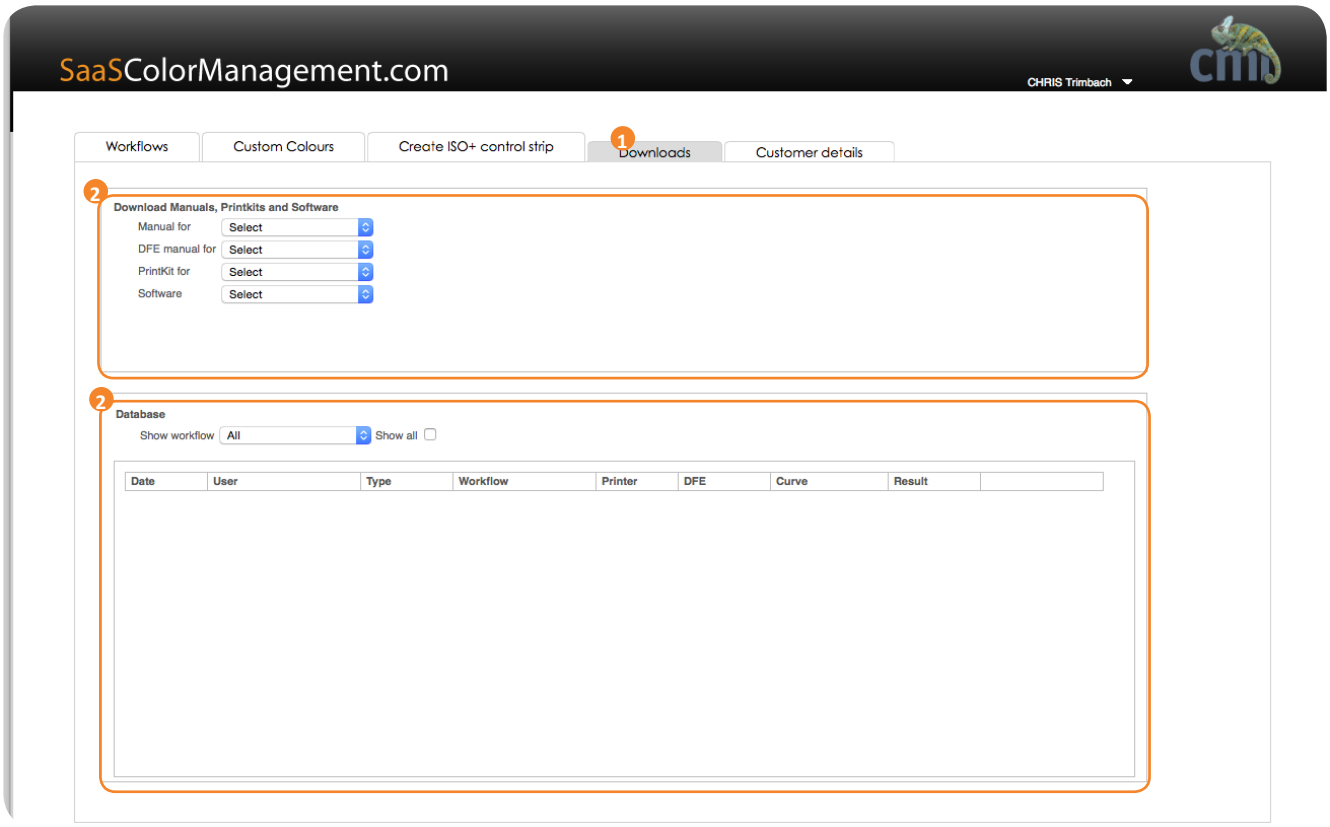


Expert Page - ISO+ / Control Strip - Overview “Under construction”.

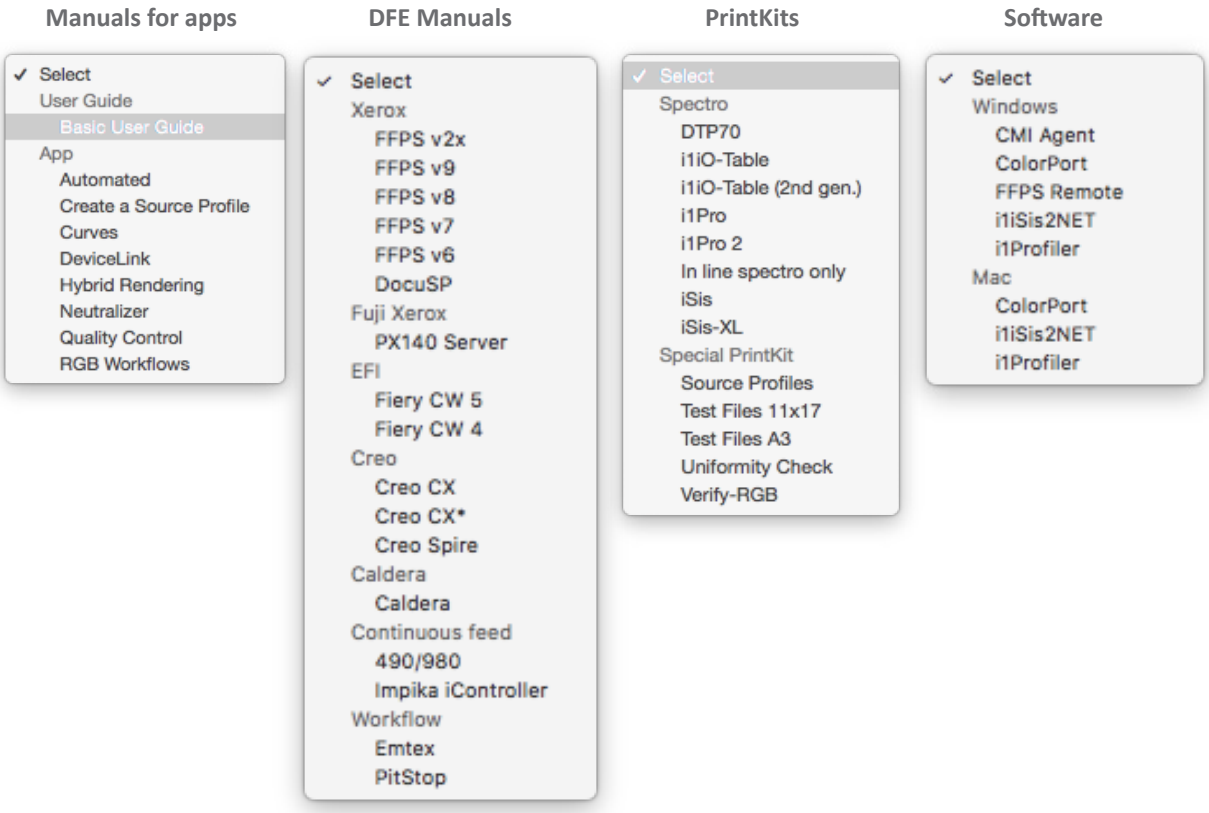


NOTE.
In depth explanations for all these settings will can be found in the downloads sections under the .APPs.

Expert Page - Downloads - Overview.

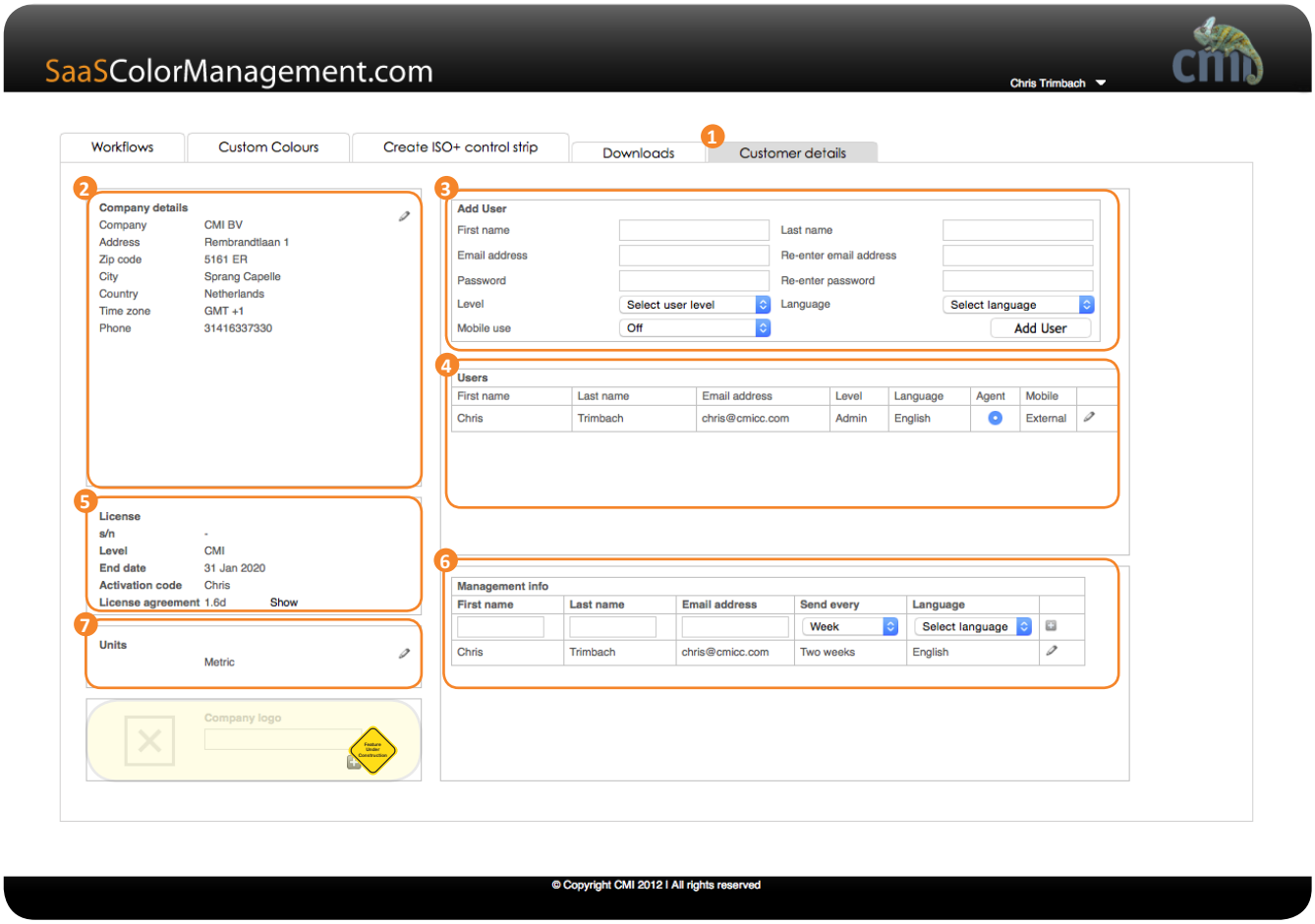


1. Grey tab indicates you are on Download sections.
2. Manuals, Software, Tools, and Sample files, can be downloaded here.



3. A full history of use of the web site can be found here.

Expert Page - Customer Details - Overview.



1. Grey tab indicates you are on Customer details.
2. Company Information. Press ✎ to edit.
3. Add new users.
   Select level: Operator (only access to operator page)
   Admin so user also have access to Expert / Service page
   Select Languages: Czech, Deuts, English, Espanol, Francais, Nederlands, Portugeus or Russish
   Mobile use: In case of automation. User can have access via smart phones or tables via internal Wifi or via external 3G/4G networks.
4. Edit existing users. Press ✎ to edit.
   In case of automation create a user what is the login for the CMI-Agent.
5. Your License Information.
6. Management Reports. Add or edit recipients of management reports.
7. Change Units. to metric (mm) or Inches

Chapter 6 New Developments.

New features will be announced on the front page of the of the web site, and via social media.

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.

support@cmicc.com

Thank You.

Our goal is to make a powerful and evolving tool, which benefits your business.

We thank you for using our product & wish you great success in mastering your colour environment.

Team CMI

Xerox Cloud Consortium
Member

xerox
Business
Innovation
Partner