Xerox Business Innovation Partner

when color matters

September 2016

CMI

AUTOMATED COLOR MANAGEMENT

&

XEROX INTEGRATEDPLUS

AUTOMATED COLOR MANAGEMENT

POWERFUL SOLUTION

to keep any printer extremely stable and accurate

Revolutionary development by Xerox and CMI

go

GREEN & LEAN

with

SAASCOLORMANAGEMENT.COM

CONTENT

03 **To Please You**

04 **Why We Use Cloud**
Cloud is absolutely not one thing.

06 **CMI and Xerox**
Revolutionary development.

LEAN QUALITY

10 **CMI Process-Corrected Aims**
Predictability and repeatability

12 **Device Link Profiles**
Save many hours of production loss and costs

14 **CMI Hybrid Rendering Intent**
A novel approach for ICC workflows

16 **Spot Color Control**
More than 9000 named colors

18 **Offset Simulation**
Migrate digital presses with traditional offset

20 **Ink-, Paper & Time Savings**
Powerful tools

APPLICATIONS

22 **Fits For All Applications**
Graphic art, photo books, packaging & labels, multiple locations, large format, high-volume production ink jet

CASE STUDIES

25 **Sooner than Later**
Dublin, Ireland

26 **Jubels**
Amsterdam, The Netherlands

27 **IndigoPrint**
Prague, Czech Republic

TO PLEASE YOU!

Delivering consistent print quality every day is a must for all print companies; the market demands it. Easy to say, but for most, achieving this is a very difficult and time-consuming process.

With the increase of color critical jobs, which now make up over 50% of all jobs, a print environment that is easy for internal staff to keep consistent and accurate is required. We have a color management solution that suits this.

Ensuring that all operators can verify and optimize print quality requires a fast process that is also easy to understand. Operators need to be able to verify any output produced on any device and substrate to in-house or ISO industry standards in such a way that the daily required quality can be guaranteed.

Understanding the correct quality level for every printer gamut is not easy; nevertheless, we must be able to ensure that the produced output meets the correct specifications. Photo books, graphic art and packaging all need different quality levels, which makes those specifications difficult to control.

On top of that, time is crucial and expensive; there is no time for endless iterations or trial and error methods to get accurate output. With a minimum amount of time and resources, the printer must be verified and, if needed, optimized so that the task of color management does not harm but rather increases the daily production volume.

Together with the IntegratedPlus Automated Color Management team from Xerox®, we have developed a new and fully automated color management solution via CMI (SaaSColorManagement.com) and Xerox® smart JMF/JDF commands as an answer to all of the shortcomings described above. It is a solution that works 100% via the cloud and is easy to setup for use with any print facility. It verifies the quality of printers in just a few minutes. The fully integrated color management solution is driven via either automated scheduling or by a button that verifies and optimizes all enabled Xerox and non-Xerox printers. It confirms extremely rapidly that all output is accurate and consistent.

CMI was founded in 1998 and came on the market in 2008 with the first 100% cloud-based color management solution in the world. Today it is successfully connected worldwide to thousands of printers in order to achieve the highest print quality. From day one, CMI has collaborated closely with Xerox® to develop the best and the most simplified color management solutions.

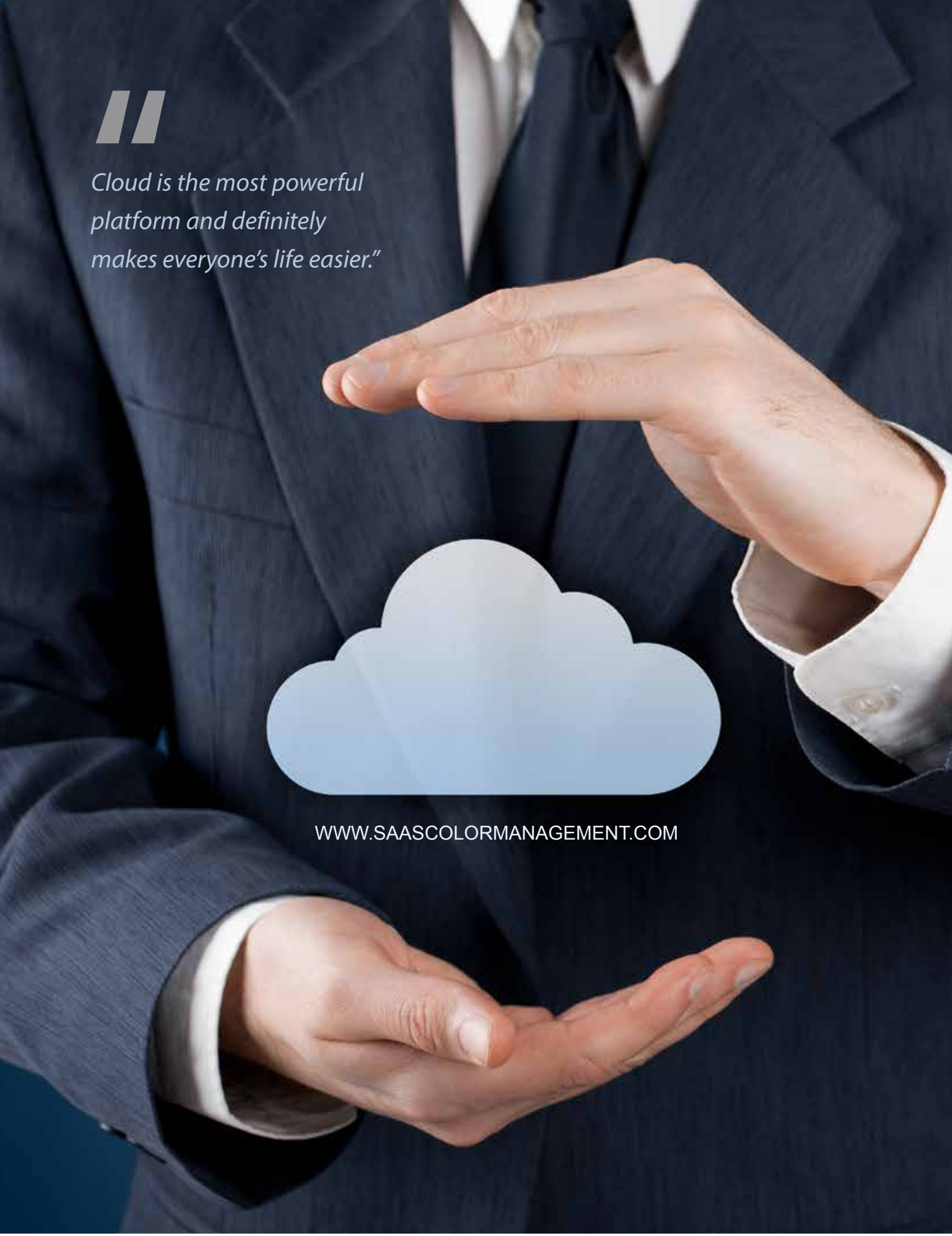
Color Management Intelligence BV
Rembrandtlaan 1
5161 ER Sprang-Capelle
The Netherlands
+31 (0)416 337330
info@cmicc.com

Contacts
Chris Trimbach
CEO
+31 653881416
chris@cmicc.com

Randolph van den Heuvel
Sales Support
+31 13551735
randolph@cmicc.com

Art Director
Randolph van den Heuvel

www.cmicc.com
www.saascolormanagement.com



"Cloud is the most powerful platform and definitely makes everyone's life easier."

WWW.SAASCOLORMANAGEMENT.COM

WHY WE USE CLOUD

The CMI color management solution works 100% within the cloud. The advantages of cloud-based management are enormous.

First of all, it reduces upfront costs, because it will be up and running in no time. Also, installing new software is all done automatically in the cloud. You will always be updated and upgraded without the need to do extra work.

It works fast because small sized files are used over the web while the hosted state-of-the-art servers handle the larger and heavier files.

The mobile cloud reduces the need for users to sit behind a monitor, and all users work with the same secure procedure: the user accesses the CMI solution via login, password and web IP-address check. Actions are identical for every operator because all operators work with the same version and settings.

All data is collected in one database instead of on several desktops, making it easy to analyse all data. Trend reports are created at the touch of a button and quality levels for daily procedures can be fine-tuned.

Furthermore, support is always close via the cloud. Experts can leverage live data for decision-making. The expert does not have to be onsite in order to give support, which helps get you back to production as quickly as possible.

Managers can keep a closer eye on the complexity of the process by using the CMI cloud database to learn more about monitoring the processes. They can also reduce errors, streamline inefficiencies and improve bottom lines.

For the user it is an ideal tool for collaborating with technicians and experts in a fast and simple way.

Operators of several levels can use the tool. Via the cloud, expert operators can set up automated workflows, connect related paper types and refine quality control tolerances, while even less skilled operators can operate and analyse the feedback.

EASY

FAST

SECURE

CLOSE SUPPORT

REDUCES COSTS

CMI'S 100% cloud-based color management solution is connected worldwide to thousands of printers, maintaining them daily to the highest print quality standards.

"Complicated color management tasks that are fully automated and simplified: It's child's play."

SO WHAT DID CMI & XEROX DEVELOP THAT'S SO REVOLUTIONARY?

- UNIFORMITY CHECK
- TRC/LINEARIZE
- BASE CHECK
- VERIFY PROFILE
- ICC PROFILE
- PANTONE® LIBRARIES

CMI is part of the Xerox® IntegratedPlus Automated Color Management project.

The project goal is to integrate an automatic color management tool to keep any color printer extremely stable and accurate.

Via self-learning baselines, the tool verifies quality and notifies the user when output is in or out of tolerances. Furthermore, the simplicity of the tool overrides the complexity of color management.

Via an automated scheduler or by just touching a button in a browser, the user starts a smart and fully automatic sequence that verifies and, if needed, optimizes the output. Pass or fail levels are based on the gamut and substrate, so any loaded paper on any color printer can be checked correctly to ensure the highest stability and quality. This quick and highly controlled methodology makes the process very simple and avoids issues or questions about quality. The automated process reduces failures and resources, resulting in rapidly growing productivity levels!

The level of automation is related to the way in which we access the measurement data from a spectrophotometer. Automatic printing of the correct targets is dependent on the availability of JMF/JDF, shared hot folders and/or FTP connections.

Today CMI supports three levels of AxCM, Automated x Color Management and a manual approach.

AiCM

100% automated color control via the CMI cloud solution and Xerox® Automated inline Color Management. Full control takes place via smart JMF/JDF commands and the ability to receive measurement data from the well-known inline spectrophotometers of Xerox® digital color presses.

AnCM

AnCM benefits from the latest near-line spectrophotometers and automation. With the option of stand-alone measuring devices, which don't require a separate PC for control, measurements are automatically retrieved by the CMI-Agent to be forwarded and analysed in the cloud. Control of the DFE can be via JMF/JDF or via hot folders and FTP connections to serve any digital color printer, including non-Xerox® printers.

AoCM

AoCM works via an offline X-Rite® spectrophotometer in the field which must be connected to a PC.
Measurement data is saved in a hot folder to be analysed in the cloud. The X-Rite® hardware supported includes: i1Pro, i1Pro2 i1iO i1iO2nd gen, iSis(2) and iSis(2)XL.

MANUAL

No level of automation is needed. All steps, including verification and optimization, are manual actions by the user. They can support non-digital color presses or color presses without automations options. Create custom source profiles of four-color offset presses for extremely accurate migration with digital color printers or to optimize the output from any color printer with limited functionalities.

"A unique and 100% lean quality control system."

Via a "Full Check" both the hardware and the color management part are checked for consistency and accuracy.

JMF commands automatically synchronize all paper types with the cloud. This lets you verify whether all the loaded media can deliver the most accurate quality.

1. UNIFORMITY CHECK

Visual control of hardware issues like banding.

2. BASE CHECK

Measures and compares density control to a known baseline. When this is out of tolerance, the next step is triggered.

3. TRC/LINEARIZE

Creates a new linearization curve and replaces the old one.

4. VERIFY PROFILE

Compare with a known baseline and check whether the latest ICC profile is still producing accurate colors. When this is out of tolerance, the next step is triggered.

5. ICC PROFILE / PANTONE® LIBRARIES

Create and replace a new, fresh ICC profile and spot color libraries via smart target and profile settings.

VQ VERIFY QUEUE

Check whether the production queue is in line with the quality control specifications. Uses predefined ISO industry standards or Process Corrected Aims to ensure that errors are correctly calculated and presented in reports that are easy to understand.

See also next item “Process-Corrected Aims”.

"The desired color of the output is controlled by the color management options in the digital front end (DFE) of a digital printer."

CMI PROCESS

CORRECTED AIMS

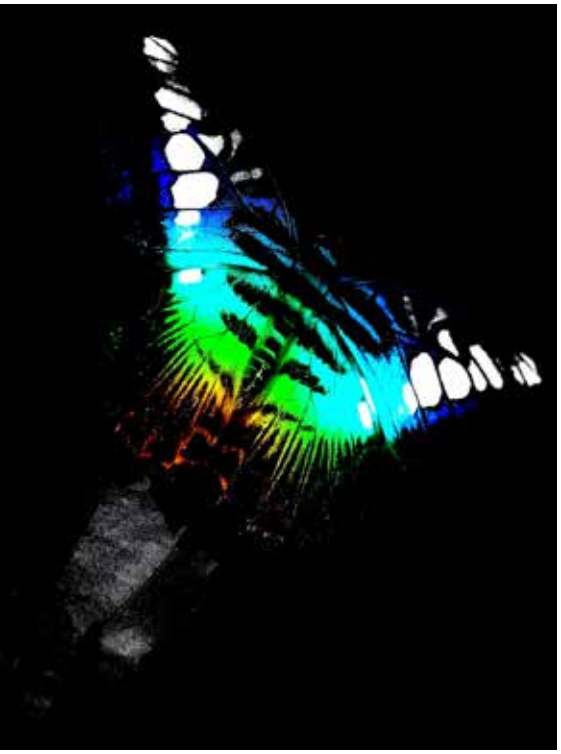
The desired color of the output is controlled by the color management options in the digital front end (DFE) of color printers. By simulating a specific gamut, the look and feel of the print job is described.

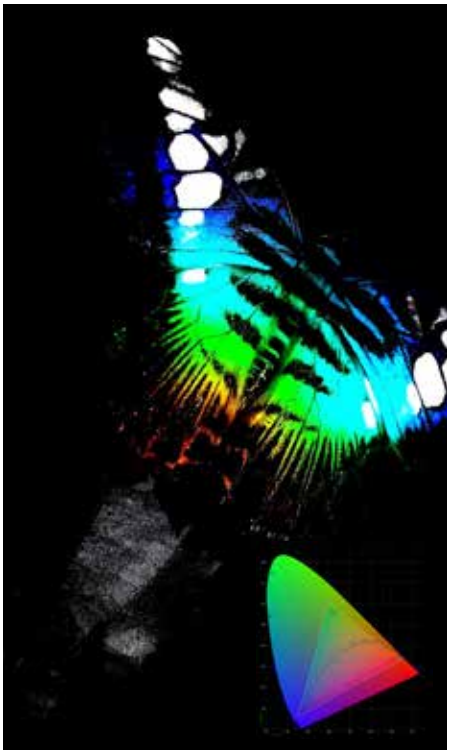
The quality of this simulation needs to be verified. When this is done, the output and the desired wish set in the source/simulation ICC profile are compared. Errors can occur from several different sources in this process. CMI takes the following three types of errors into account:

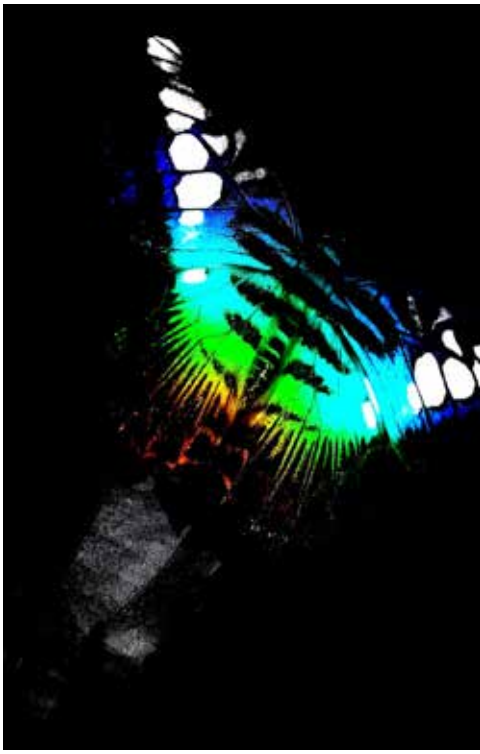
Theoretical: The error can occur because the used simulation profile is out-of-gamut for the printer. The aims are based on the white point of the simulation profile (Absolute), or the aims are based on the white point of the production paper (Relative).

Predicted or In-Gamut: The error can occur when the output is not in line with the predicted color aims of the color management conversion process. The error is process based because only "in-gamut" colors are in the equation.

Measured / Consistency: The error will occur because of drift of the printer via a comparison with the baseline. Measurements from earlier events are used to set the baseline.







Source Profile

color conversion

gamut check

Printer Profile

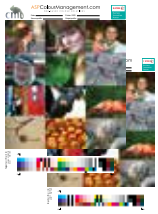
Customer's wish

Theoretical quality

In Gamut / Predicted quality

print process

Predictability and consistency can be checked via CMI Process-Corrected Aims



consistency

drift

Printed Output

Easily understandable reports

To understand quality specifications, all measurements and comparisons are given in easily understandable reports that provide both an overview and highly detailed sections. Users can make decisions based on the Theoretical, Predicted/ In-Gamut and Measured/Consistency methods. Understanding the variations in these values is all you need to understand in order to get a process back within specifications when it needs to be optimized or maintained.

Baselines

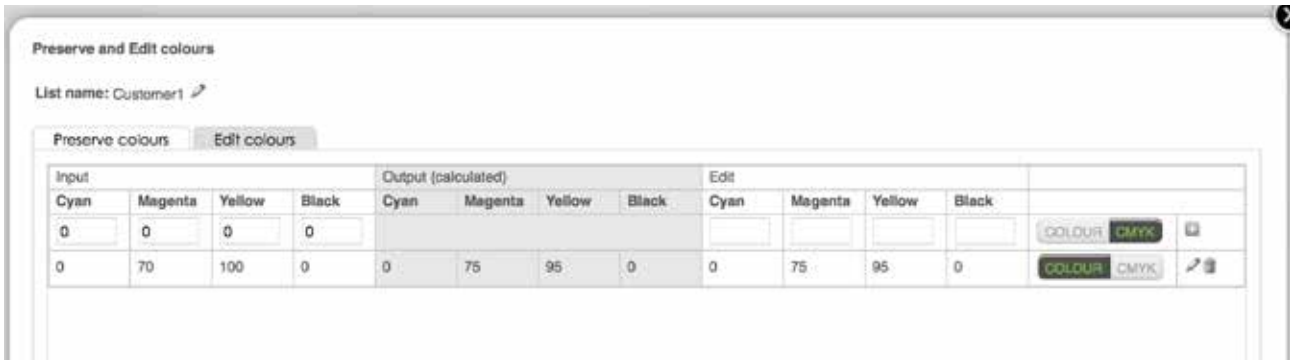
All baselines are printer and substrate specific, process-based calculated or set by measurements. All data is stored in the CMI cloud database for trend analytics. Baselines are automatically refined or can be reset by the user.

DEVICE LINK
PROFILES

EDIT COLOR TO THE RIGHT DIRECTION

A DeviceLink profile contains a fixed matrix that is based on the source ICC profile and printer profile. DeviceLink profiles transform data directly from a CMYK / RGB input color space to a CMYK output color space without using an interim color space. DeviceLink profiles can be edited easily but are not as flexible to use as source and printer profiles (device profiles).

Because of the file format of DeviceLink profiles, the user has the option to optimize output based on requirements via the powerful CMI DeviceLink editor. Changing the output colors happens in an easy “Edit” interface, and separations are kept clean via the “Preserved” functions. Any conversion can be easily changed to a different value.



Benefit from the option to optimize output via the powerful DeviceLink editor based on your needs.

"Huge, print-ready files can't be easily optimized to get the needed color."

DeviceLink profiles can be very valuable when huge, print-ready files cannot be optimized easily to get the needed color output. This is often seen in high-volume inkjet productions. In this way, the operator can easily correct colors in minutes without going back to pre-press. This saves costs and many production hours.

Also, DeviceLink profiles can include ink savings when they are created. This includes the standards described in the chapter "Ink Savings", but it also preserves function to avoid contamination by an unwanted color in a separation.

CMI HYBRID RENDERING INTENT

A NOVEL APPROACH FOR ICC WORKFLOWS

One of the reasons ICC workflows are frequently plagued with problems can be traced back to the early days of ICC, when media was not fabricated with optical brighteners. The standard relative colorimetric rendering intent provided a reasonable path to cross-render between processes that had similar white points and dynamic ranges. In contradiction to what is done now, using the white point of the destination process to define what was perceived as neutral worked well.

For several years now, and with big success, CMI has provided its users with the ability to create a new type of ICC profile: one that accommodates the white point and dynamic range differences of paper using simulation profiles.

Optical Brighteners

Media containing optical brighteners are now very popular. Unfortunately, matching colors between substrates is more difficult when these substrates contain high levels of optical brighteners. Relative color rendering works wonderfully for light colors but falls apart when it comes to matching saturated colors. Absolute color rendering intent solves this problem for darker and more saturated colors, but falls apart for light colors because it is impossible to compensate for the color of the paper with the small amounts of ink required to print them.

CMI Hybrid Rendering is a mix of all rendering styles and the right one is used where it's needed.

M0 or M1 instead of M2 or UV-cut filters

Using the M2 setting of a spectrophotometer eliminates the UV effect of the brighteners in the measurement and thus, a match between different media becomes impossible when illuminated with UV/daylight.
CMI Hybrid Rendering solves this shortcoming by using the "raw" data with the correct amount of UV via M0 or, even better, M1.

Different gamut compressions

When default color rendering styles are used when there are gamut differences, not all areas have the correct look and feel. Examples are clogging in deeply saturated areas, easy casts in neutrals or miss-matches in skin tones and highlights. CMI Hybrid Rendering solves these shortcomings, too. Users can produce outstanding photo books or compress very big source gamuts to any output gamut extremely easily.

G7 guidelines for cross-media matching

The G7 guidelines for cross-media matching is a very successful solution for traditional ink-based production devices but it's no fit to an ICC color managed approach. The complex adjustments of the color reproduction process have to be embodied in the ICC profile. It can works when near-neutral white points are used, but not with high levels of optical brighteners or with big gamut compressions. CMI Hybrid Rendering leverages its ability to optimize the dynamic range between a source and the destination processes with or without optical brighteners. CMI Hybrid Rendering gives you what is needed to deliver G7 appearance in an ICC profile workflow.

The benefits of the hybrid are high:

- Optical Brightener Agent (OBA) can be better controlled with M0 and M1 measurements than M2 (UV-Cut). This simplifies the workflow as the operator only needs to use one type of measurement device.
- The gray balance is perceptually very neutral and is consistent with the requirements of the G7 approach.
- Light colors and highlights have greatly improved rendering across different substrates.
- The full dynamic range of the source image is optimally matched to the full dynamic range of the output.
- It works with any color-managed output device on any type of substrate.

Many benefits in one new type of color rendering, a must have:

Use substrates with high levels of optical brighteners.

Optimize output from different dynamic ranges between the source and printer profiles.

Benefit from the G7 approach of traditional ink processes with digital color printing.

Always measure with M0 or M1.

"Simulating brand colors on a digital printer is a nice option, but when it is not correctly done, it quickly starts a time-consuming optimization process. Inconvenient action will have to be repeated with every similar job that contains spot colors."

Simulating brand colors on a digital printer is a nice option, but when it is not correctly done, it quickly starts a time-consuming optimization process. Besides, this inconvenient action will have to be repeated with every similar job that contains spot colors.

Spot color, or named colors (like Pantone®) use a different color conversion route. A spot color is related to an absolute color value, mostly defined in L*a*b. The digital front end (DFE) needs a library to receive the best separation values in four or more colors to simulate this color accurately.

Custom colors

CMI offers the option to control special brand colors via the "CMI Custom Color list". In this list, the user can add any name with the right color information via L*a*b*, a measurement of a sample or using fixed CMYK values. All printers, both in-house and in all connected locations, benefit from the same custom color list.

Exceptions

Very often, the reference for a spot color is not the original color value at all, but rather a printed sample of a pre-printed production. Printing this pre-printed color correctly on a digital printer is a time-consuming trial-and-error process. This is not an easy process in standard CMYK, but in CMYK, with the addition of a fifth color, it becomes exponentially more difficult. CMI introduces an exception list, which is an easy method for reproducing an accurate reference for the desired brand color.

SPOT COLOR CONTROL

MORE THAN 9000

NAMED COLORS

Rebuild spot color libraries

Users can build new libraries of exception lists and custom colors for special production runs, making the process very flexible with different paper types. Newly created libraries are automatically replaced on the DFE so that almost no production time is lost.

CMI spot color algorithms optimize all known spot colors, including Pantone® (old and plus) and HKS, and user-created custom colors can be included (so in total 9000+ custom colors). This rapid, advanced solution can find the best match for any spot color for any printer gamut with the closest deltaE2000 to the reference.

Also, when the printer faces color drift, the same CMYK value that was used previously will now result in a different color. The libraries then need to be optimized. CMI ensures these drifts are automatically adjusted in color libraries.

Environments with multiple printers locally or in different locations can benefit from the fact that all CMYK or CMYK+ printers will use the same library with the same custom color list and the same exceptions. CMI can guarantee that all printer workflows are optimized with the same reference data.

OFFSET
SIMULATION

MIGRATE DIGITAL PRESSES WITH ANY OTHER GAMUT

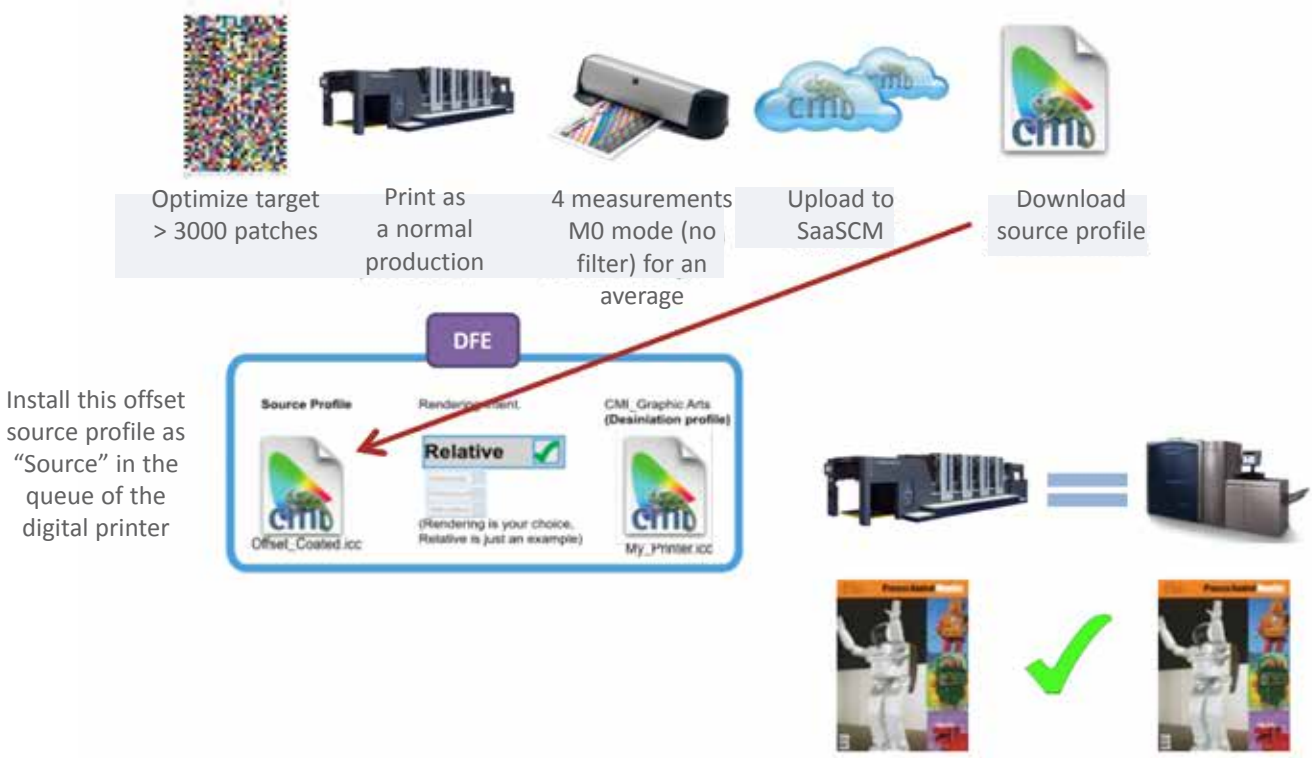
One of the great, unique options of digital color printers is the ability to easily simulate different gamuts compared to traditional presses such as offset, flexo and other digital presses. Via the color management settings in the digital workflow, the user can assign different source profiles to produce the look-and-feel of the related gamut on a digital press.

Matching your digital press with traditional press output requires simulating the source profile as exactly as possible. ISO standards have made this process a lot easier, but in practice, the traditional press is almost never 100% in line with this ISO source profile. This can be caused by multiple reasons, from the inks, media, and chemicals to the hardware. Even using ISO inks, G7 press calibration and ISO profiles is no a guarantee that the two production methods will match.

To handle this matching problem, CMI built a simple process to create a unique custom source profile for the offset press to simulate that gamut on a digital press. Creating the source profile is a one-time action via printing a target on the press, measuring it and creating the source profile.

Now we can create a custom source profile for any traditional offset output, as well as any other digital press. When both the source profile and the printer profile are built on the same media, the accuracy of the simulation is only related to the gamut size of the digital press.

The color management workflow of the digital press ensures that the production delivers a very accurate match to the traditional press. The user is also able to check using the custom quality control setting on CMI SaaSColorManagement.com whether the digital printer is indeed accurately simulating the initial gamut. This option makes the migration of a digital press to your environment extremely easy and avoids the issues of unmatched mixed products.


Optimize target > 3000 patches
Print as a normal production
4 measurements M0 mode (no filter) for an average
Upload to SaaSCM
Download source profile
Install this offset source profile as "Source" in the queue of the digital printer
DFE
Source Profile
Relative
CMI_Graphic Arts (Desiniation profile)
Offset_Coated.icc
(Rendering is your choice, Relative is just an example)
My_Printer.icc

EASILY SAVE UP TO 25 % INK

AND MAKE LIFE GREENER

INK **SAVINGS**

Along with creating a greener environment, saving ink saves a lot of costs and increases margins. Non-optimized workflows can easily consume 25% more ink than necessary, and with visual inkjet printers, this is easily calculated.

Ink savings can be done via linearization curves or ICC profiles.

Linearization curves

Linearization curves control end densities, preventing overtoning or bleeding ink channels. This is a simple step that also increases quality. You can use the full dynamic range of the printer without going over that. The end density can also be reduced, causing the ink layer thickness to drop quickly. This can bring big savings with almost no visual differences.

ICC profiles

CMI is very strong in using high levels of K to define grayness without creating noise in an image. The other step is controlling the Total Ink Limit or Total Area Coverage (TIL/TAC). Ink jet devices require a high degree of control. For that, CMI has again built a unique option: multiple TIL/TAC values in one ICC Profile. A specific value is used for the neutrals and a total different TIL/TAC value is used for the colored areas. Now neutrals can be printed using a low TIL/TAC value to avoid defects and high color values can be printed independently to increase the accuracy of printed brand colors.

Other items to fine tune costs can be achieved via preserve colors as part of a device link, photo profile, black start, and hybrid rendering.

"Save a lot of costs and increase margins."

PAPER **SAVINGS**

Correct color control can save a lot of media, which not only saves direct costs but also saves our forests. Efficiency is achieved when presses are accurate and consistent. Accuracy bypasses the need for trial-and-error workflows and remakes of incorrectly printed jobs.

CMI has also developed a unique technology that uses small targets to create high-end ICC profiles and for use in quality control. A full profile target for CMYK or multi-color fits on a single sheet of A4 paper. This technology reduces printing patches up to 80% to create CMYK and multi-color profiles when using an in-line measurement system.

TIME **SAVINGS**

Automation and integration are key factors in increasing efficiency. With the "old" traditional way, it can take hours to make a single new ICC profile. With CMI, it now takes only two minutes to check whether a press is within specifications and about ten minutes more to install an up-to-date ICC profile. Production uptime increases because CMI stops the never-ending (internal) discussions about print quality and print standards. Fewer remakes, and often none at all, need to be made due to color issues.
Gains of an hour of extra production time per shift are feasible.

On top of that, the CMI quality control process is lean (in line with your production). It can verify the quality of any color printer based on any gamut. Depending on the quality of the printer, it follows substrate corrected aims or the absolute aims of (ISO) industry standards. Via the CMI process-corrected aims (see pages 10 and 11), anybody can verify whether the output is consistent and accurate in just a few minutes' time.

"CMI is always willing to collaborate closely to find the best method for your environment."

FITS FOR ALL
PRINTERS & APPLICATIONS

The CMI solution is a unique solution that can control all your digital printers. The minimum requirements are that the system can be controlled via a color management system.

CMI is always willing to collaborate closely to find the best method for your environment. CMI integrates with your workflow and simplifies it without adding extra hardware or creating complexity.

After the system is installed by experts, any operator is able to use it to control color quality. Baselines are set to verify consistent quality based on specific paper and color management settings. When the verification fails, the system automatically optimizes the related ICC profiles and spot color libraries. Within a few minutes, the print quality is guaranteed without losing production time unnecessarily.

Based on your specific application, we can give some extra input about how Xerox® IntegratedPlus and CMI SaaSColorManagement.com can help your daily operation.

GRAPHIC ART

CMI's color management system is great for applications like brochures, leaflets, posters, business cards and all other print jobs related to communicating about products and services. Color quality is set by industry ISO standards or by in-house standards. Brand colors can also be defined as named colors like Pantone® or HKS® or as a custom-named colors. Color accuracy and consistency are a must to fulfill the needs of print buyers, and with Xerox® IntegratedPlus/ CMI solution, you will have all the right tools to do so. Any operator can verify upfront whether the print queue is set up following the specifications. The baselines are based on paper and color management settings. When the verification fails, the system automatically optimizes the relevant ICC profiles and spot color libraries. Within a few minutes, print quality is guaranteed back on track without any unnecessary loss of production time.

PHOTO BOOKS

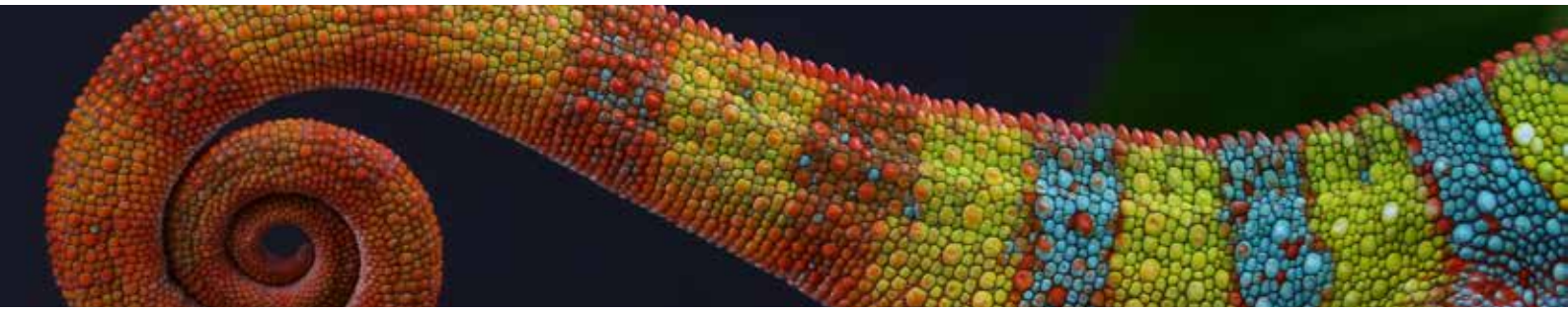
Color and images are the very heart of photo books, and they need to be consistently presented with the best look and feel. Neutral gray balance, full dynamic range, perceptual smoothness, brightness, contrast, nice skin tones, and (the avoidance of) clogging of saturated colors must all be controlled. The color management settings, the selected source profiles and the output ICC profiles all have a big influence on this.
The CMI option to use device-dependent Photo Profiles and the CMI Hybrid Rendering Intent ensures that your output will be of optimal quality. Also, it works on any paper stock within any gamut. When the optimum settings are achieved, the automatic baseline technology will verify and guarantee consistency day after day.

PACKAGING & LABELS

Packaging and labels make up a world of their own. Direct recognition of products depends on the correct brand or product colors on the shelves, requiring high-end process quality.
Color verification is not necessarily via an ISO standard but a known spot color. Flexibility is needed to set the aim, whether that's the original aim or when an exception must be made in case the reference is different.
Brand owners claim that the converter traces the quality of daily performance with L*a*b and DeltaE values. This also requires custom control strips that include your unique brand colors.
The Xerox® IntegratedPlus solution driven by CMI quality control system can verify that every printer queue is hitting your high standards. All data can easily be reviewed via reports in the database. Upfront information on the predicted quality is available from all loaded spot colors in CMYK as well as in five colors based on printer gamut and the media used.

MULTIPLE LOCATIONS

Every year the number of high-end color-critical jobs grows in print shops. While this is great for business, it also requires that the quality is in line with customer expectations. Quality needs to be daily checked and optimized if needed by the local operator. CMI understands that this is not easy with "old school" color management solutions. These are time consuming and difficult to understand. That's why CMI is delivering a fully automated solution driven by a time scheduler that can be controlled by any group manager. Only minimum color management skills are required.
With CMI you can guarantee the same quality from each store.



LARGE FORMAT INKJET

The sign and display market has its own complexities: many different media are used along with many different printer types. Controlling the output of all different media at the highest quality levels via custom calibration curves and ICC profiles is difficult. On top of quality, controlling costs via ink savings can increase your margins enormously.
CMI is built with a unique calibration and profiling method and an easy to understand workflow that can handle everything. And the steps are the same for each rip/printer. This can save hours of trial and error. Full control of the black level and maximum use of ink is easy to set in SaaSColorManagement.com workflows. Start with a preset and re-calculate the profiles with levels based on lower costs by increasing the amount of black in the separations.
Image quality is fully under your control with the unique CMI hybrid rendering system. The unique inks used with wide-format printers deliver a big gamut, requiring control of the full dynamic range.

All these functions are included in CMI's solution, from controlling calibration and ICC profiles to ink consumption.

HIGH VOLUME PRODUCTION INKJET

High-speed inkjet printers produce many pages per minute while printing CMYK on uncoated paper. The drop size and resolution influences the print quality. Costs are defined by paper and ink consumption. These printers have systems with many quality options and each specific setting delivers its own color characteristics.
At the same time, printer gamuts can be limited because of the high-speed production and small drop sizes. You need an easy-to-use color control tool, and CMI's got it. The CMI tool manages the look and feel of images, colors (with best matching to brand colors), ink savings and front/back control for these environments.

CMI SaaSColorManagement.com provide the best control of colors in these limited gamuts. No guessing is needed to match a brand or Pantone® color, achieve outstanding image quality, benefit from the maximum ink savings and minimize visual color differences between front and back when using two print towers. Everything you need is concentrated into one unique cloud solution.

Dublin Ireland, Founded in 1982, **Sooner Than later** produces and delivers high-quality digital print and mailing solutions for an impressive array of clients, including government departments, charities, publishers and retail outlets. Operating from Dun Laoghaire County, Dublin, Sooner Than later is owned and managed by two brothers, Andrew and Mark Finney together with a team of over 25 employees.

With thirty years' experience, they are experts in data cleansing and data management, and the securely use data to produce various high-quality mailings and personalised marketing material. They also produce a wide variety of digital printed products, from brochures and product catalogues to wide-format posters and pull-up banners.

With the increase of color-critical jobs Sooner Than Later faced issues of consistency and accuracy, especially across the range of printers they use. To address these issues without losing efficiency, they invested in the Xerox Automated Color Management system from CMI.

They choose this solution because of its simplicity and high-quality output. At the beginning of 2015, they implemented the fully automated control version on the Xerox iGen4 with semi-automated control of their inkjet printers.

According to Mark Finney MD:
"From day-one of CMI SaaSColor Management's installation we haven't looked back. To meet increasing demand for our services, we invested in a second iGen before the year ended. The CMI solution gave us exactly what we needed - top quality automation, integration and high-end ICC profiles. The CMI solution also increased the up time of the iGens, helping us to delivery faster turnaround times. I would also like to mention the way CMI supports us. All our quality control data is stored in their cloud database. They show us variations earlier than we are aware of it. Very useful!"

jubels

print & more...

"I can keep the printer in the highest specs while doing other activities."

Communication specialist Jubels is based in Amsterdam, The Netherlands. They produce high-quality print work for customers in the graphic arts and photo industry. Historically an offset environment, they bought the first Xerox iGen digital color printing press in 2004, the iGen3. Today Jubels is printing high-quality photo art books on a Xerox iGen5 and in offset. Image quality, printing in the right standard and the look and feel of the total production using special substrates and unique binding methods of books are unique selling points of Jubels. Jubels started with CMI's color management when their iGen3 made way for the iGen4. Because of the hardware change, Jubels faced a different output quality, and the need for a high-end color management solution was born.

Jeroen van Druenen, CEO Jubels: *"We invested in CMI because they could verify consistency, accuracy (Fogra Standard) and migrate to digital with any CMYK offset production. With CMI we verified daily the quality and consistency of the iGen4, and we could make custom offset profiles to match even our uncoated stocks for offset productions on our iGen4. Because of the CMI business model we automatically received CMI's latest tools and with some new specialities like CMI Hybrid Rendering to optimize the RGB to CMYK conversions, we received very good feedback from the art world. Digital productions looked even better than offset."*

The iGen4 became iGen150 and CMI simultaneously introduced their automated solution as part of Xerox IntegratedPLUS Automated Color Management. This unique concept helped Jubels to grow, and the iGen150 became an iGen5. 'Manual' color management required a great deal of focus and time from the skilled operator, so they only verified a limited amount of different stocks. Now with the CMI automated workflow, they use high-end CMI ICC profiles and verify all paper stocks in minutes. Because Jubels advertises maximum quality of every delivery, it was necessary to keep their quality consistently high every day. With Xerox IntegratedPlus and CMI, they can do just that.

Jurriën Draak, the press operator: *"With the extremely fast and simple methodology of CMI Automated Color Management with Xerox IntegratedPLUS, I can keep the printer in the highest specs while doing other activities. We now deliver the best quality daily but I could also increase the production capacity by approximately 1 hour per shift."*

Based on their high standards and the consistency of the Xerox iGen series, Jubels received high praise from the industry and the iGen150 became the preferred engine for printing. This was further confirmed by the many awards they have won, such as 'Best of Best' and 'Zilveren Camera'.

Jeroen van Druenen explains:
"The way we see the future is that via automation and integration of smart technology we can increase oThe way we see the future is that via automation and integration of smart technology we can increase our production and our quality levels and we definitely see our production costs decrease. Xerox and CMI are great partners in that respect. We could not live without it anymore."

"As soon as we had the color management solution, we noticed the difference."

IndigoPrint is a hybrid printing house in the old city centre of Prague, Czech Republic. They work with offset and digital presses. Nearly two years ago, they needed to replace the HP5300 and invested in a Xerox iGen150 with a FreeFlow Print Server color press. We choose this one because of the ability to print in a larger format (650x350 mm), the quality of the print and the economy of the run.

Martin Sanek, analyst at Nextar Group, was closely involved with the start-up of the iGen150, thanks to his long experience with Xerox iGen. He saw that operators knew exactly how output had to look, but because they only had experience with offset presses, they were missing essential skills around color management. Martin considered several options and recommended the unique partnership between Xerox and CMI. After a short test period, Indigoprint invested in Xerox IntegratedPLUS Automated Color Management with CMI.

Ales Vesely, Sales Director said: *"As soon as we had the color management solution we noticed the difference. In the past the operators needed to set up the colors themselves and they had many options. These they needed to remember for the same job, the next time. With Xerox IntegratedPLUS Automated Color Management with CMI, it is fixed so no need to set up the colors again. Thanks to the high quality ICC profiles from CMI SaasColorManagement.com in combination with Xerox DFE FFPS, the output quality of all our print jobs including the art books is now extremely consistent day-by-day and it's accurate, totally conforming to the wishes of our customers."*

The iGen now runs full time in two shifts, without needing to stop to reset colors. Daily, the colors are fully verified automatically and checked via the reports from CMI whether the output is within specs. Each run is only visually checked by the operators and it has always been good so far.

Ales Vesely: *"Because of this, and the larger format, we have seen an increase in print jobs of 100% compared to our former HP digital press."*

IndigoPrint prints a variety of jobs, from business cards, to art books and art catalogues, to flyers and all kinds of print work requested by their customers. The specialize in the types of jobs that require top quality, like catalogues and art books for the biggest gallery in Prague, books for the Czech Academy, catalogues, business cards, posters and leaflets for several companies located throughout Czech Republic.

Ales Vesely: *"We are very pleased with our investment but if we may ask then we would like to see the iGen gets a fifth toner station with transparent toner for spot varnishing. On the color management part, I have nothing to wish for. This runs smooth and does exactly what it should do."*

COLOR PROCESS CONTROL

SAASCOLORMANAGEMENT.COM

xerox®

Business
Innovation
Partner