The right color is important…

Technical Impact on the Industry

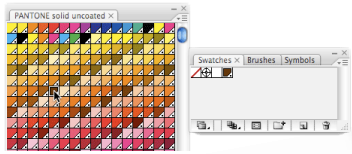
Traditional, subjective color management no longer will suffice among global brands. Only a standardized approach can provide the means to satisfy this competitive market.

ISO 17972-4 CxF/X-4 ***is a common language to communicate color across supply lines.***

Over the next 5 – 10 years, printers, ink makers and designers will increasingly adopt CxF in response to pressure from global brand owners.

How we communicate color today?

?



Challenges on color that we face day to day:

?

we are guessing it ?

- not me
- not my press operator
- not my customer
- not my boss too
- then who?

but the color must be right !

That’s how I mix my color in the lab,
but don’t worry, every time can be the same..

Who is responsible for the right color?

?

- The Customer?
- The Design Agency?
- The Pre-Press Company?
- The Ink Company?
- The Printer?

Color control?

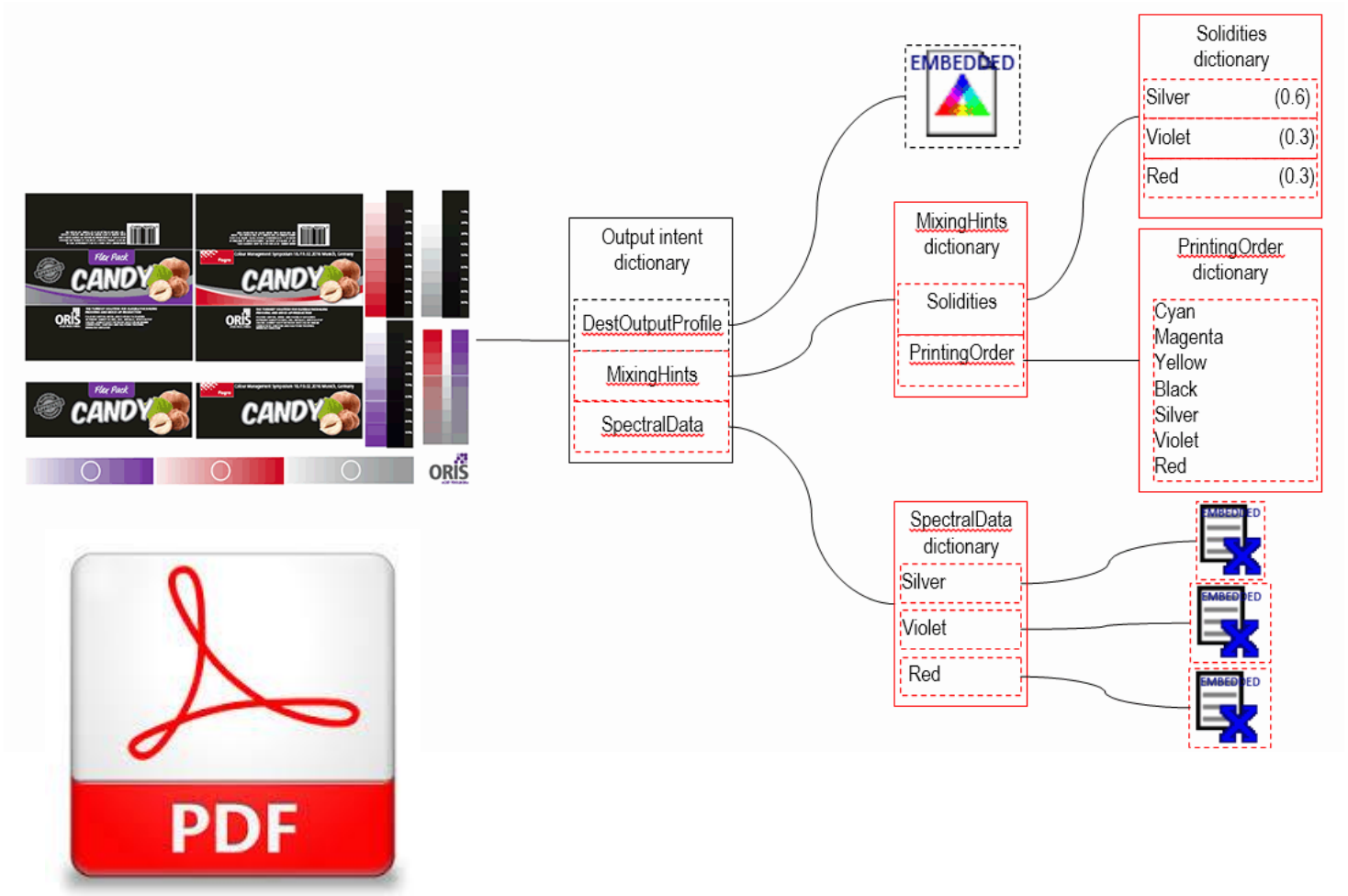
Everyone is involved

Why not using CxF???

What is CxF?

- CxF is the "new" CGATS data exchange format for spectral color information
- CxF /X-4 allows tags and additional information to be stored with the color data
- CxF /X4 data can be embedded in the new **PDF 2.0 Standard** (ISO 32000-2)

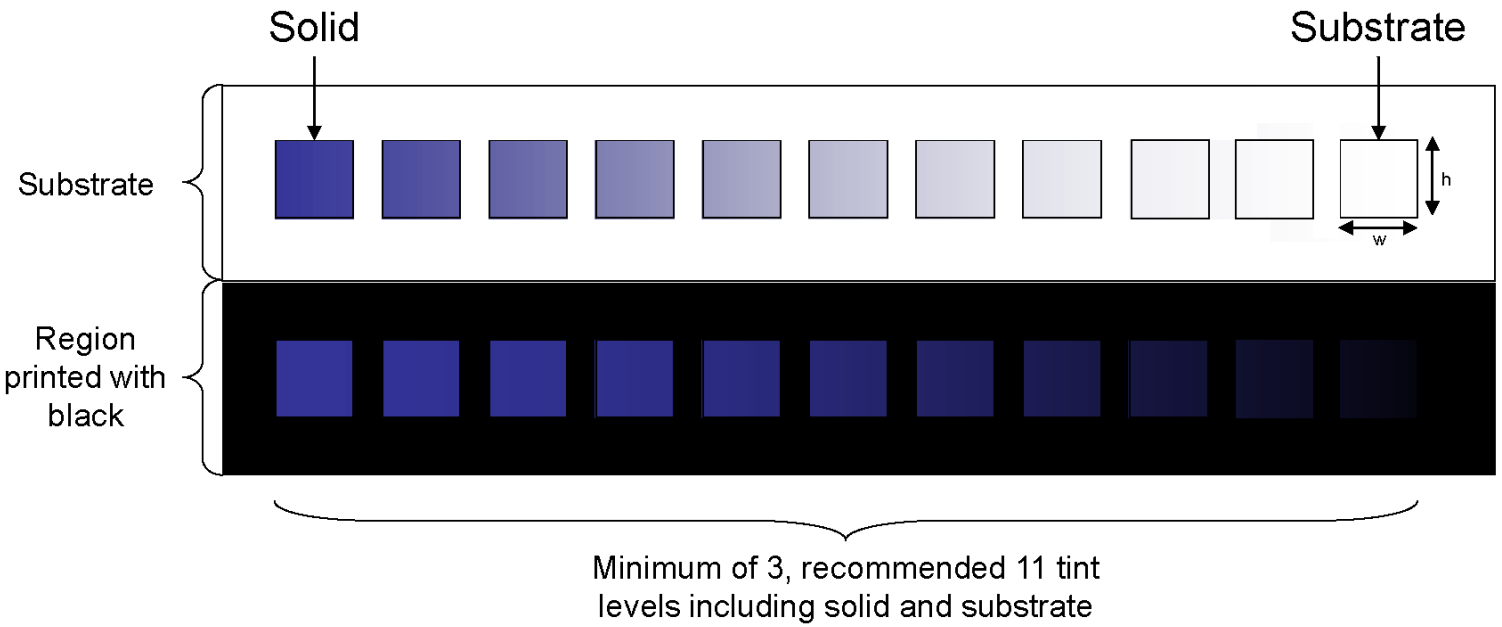
PDF 2.0 (all embedded)



CxF/X Standard

- ISO standard that established the Color Data Exchange Format (CxF/X) for spot color characterization data
- After measurements are taken of a brand color, users can convert the data to CxF/X4 data, and then export it to a PDF/X file, tagging it with color definitions and sequence instructions
- CxF technology is used to control and verify compliance with the brand color throughout the supply chain—from brand owners to packaging designers
- A key benefit is its standards-based and non-proprietary nature as well as its ability to communicate color precisely between multiple graphic service providers.

CxF/X Standard



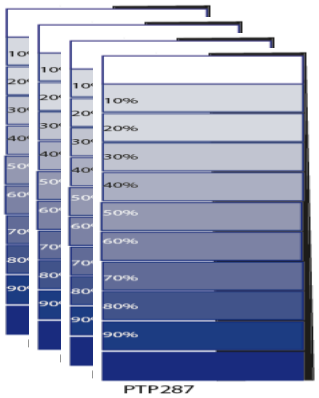
Type of measurement	CxF/X-4	CxF/X-4a	CxF/X-4b
Solid ink printed on substrate	Required	Required	Required
Tints of ink printed on substrate	3 minimum, 11 recommended	3 minimum, 11 recommended	No requirement
Tints of ink printed on black background	3 minimum	No requirement	No requirement

Digitized CxF data for PDF Global Workflow

Print Brand Colors

Read Results

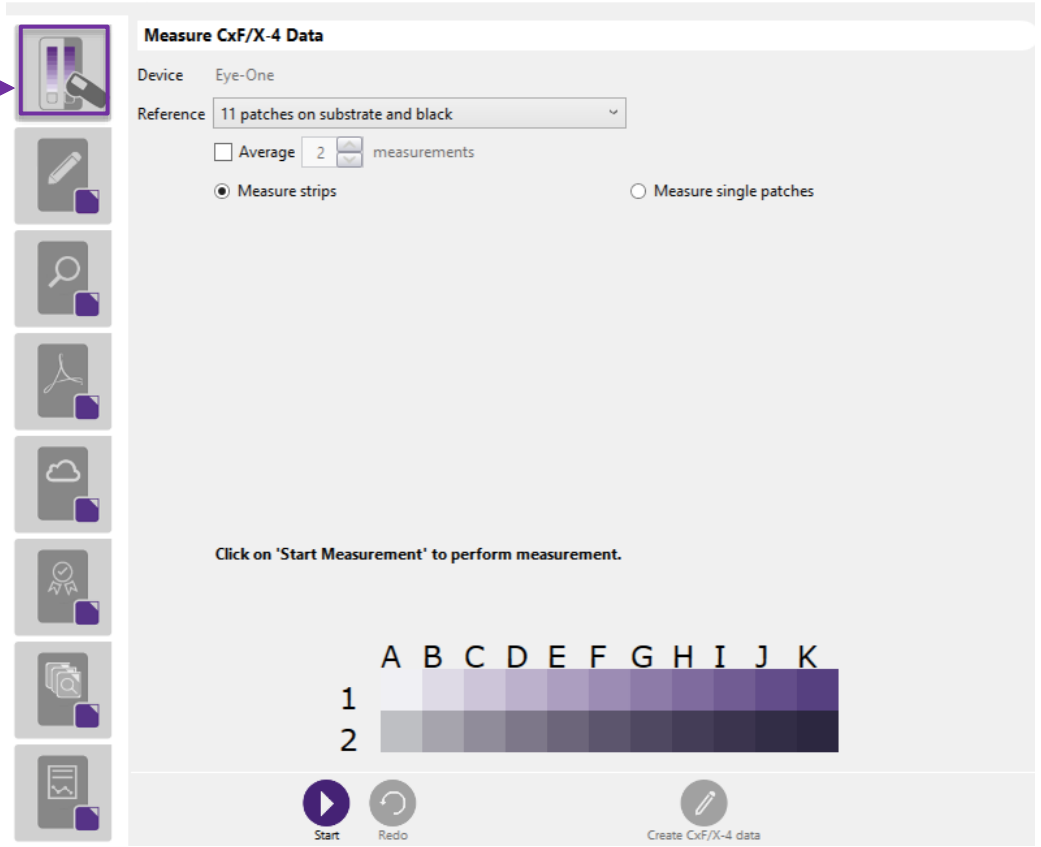
Take Average



Create CxF File

Technology Overview

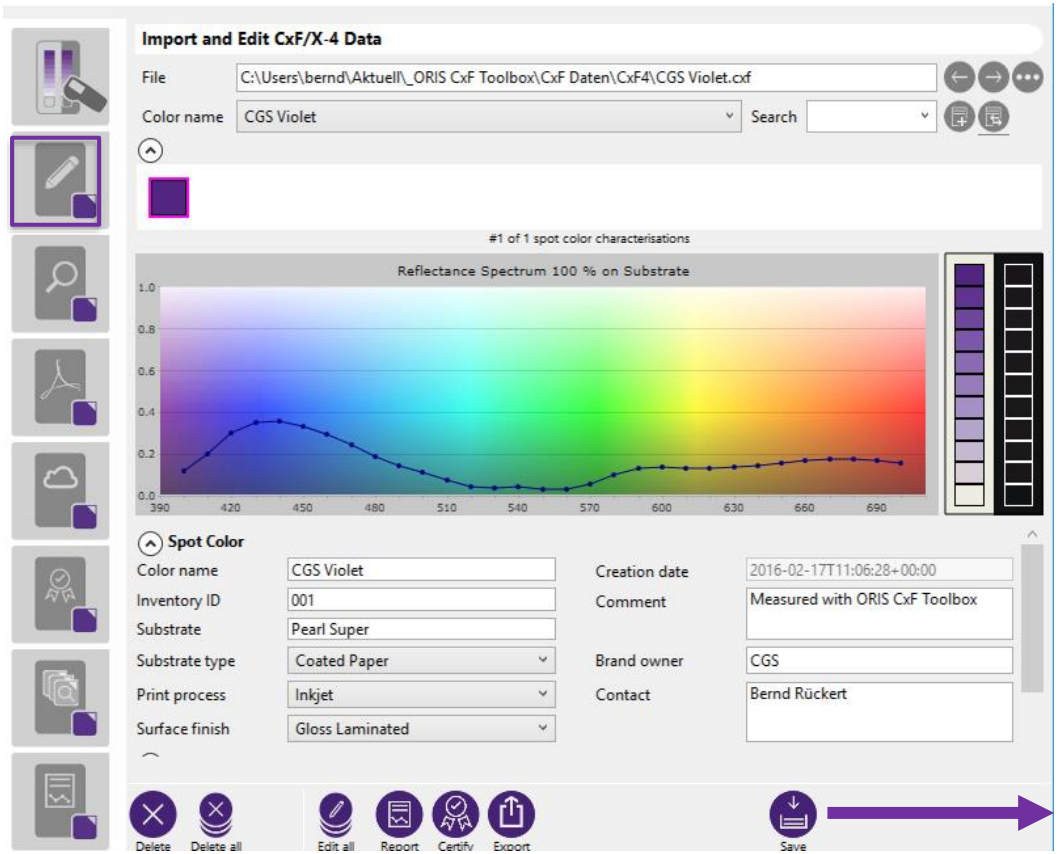
- Step by Step:
  Measure spectral data
  (patches or strips)



Technology Overview

- Step by Step:

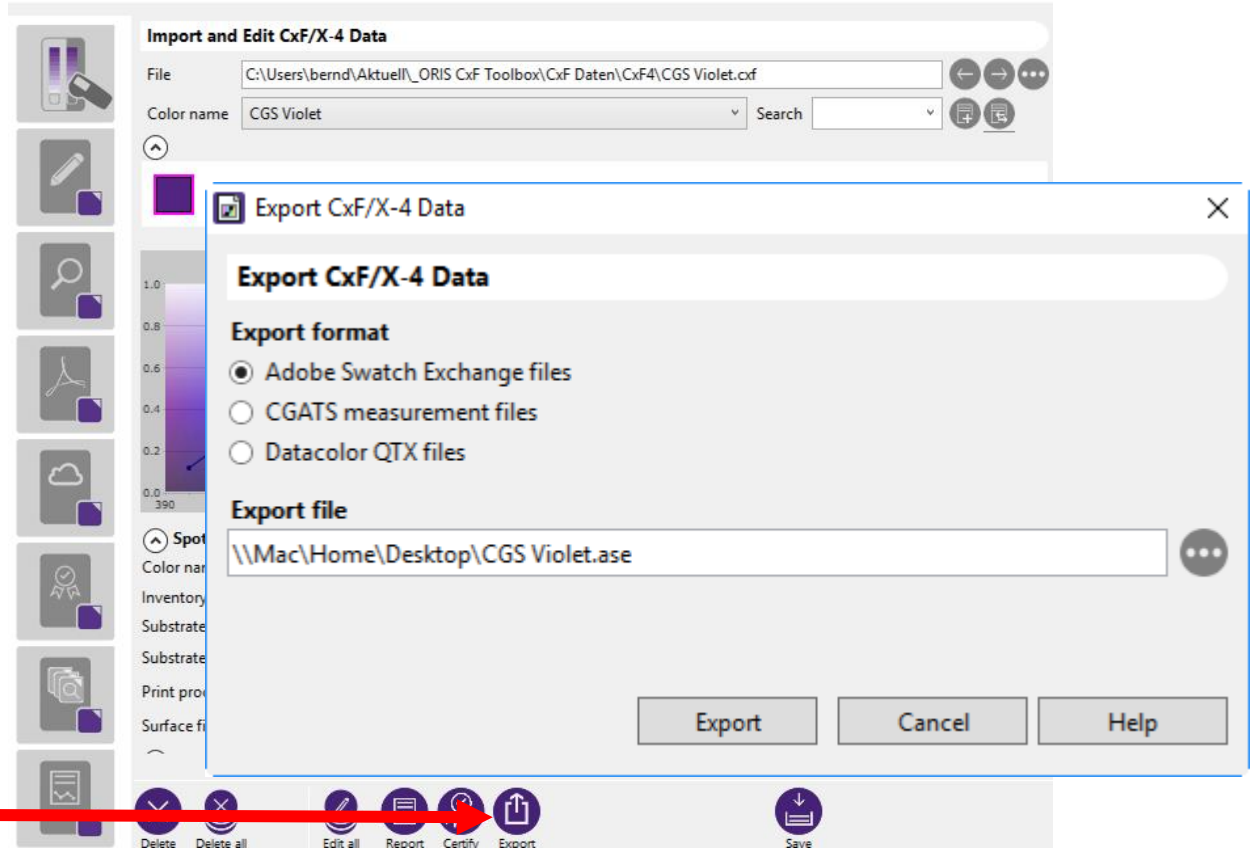
Define the CxF/X-4 data and save it!



Technology Overview

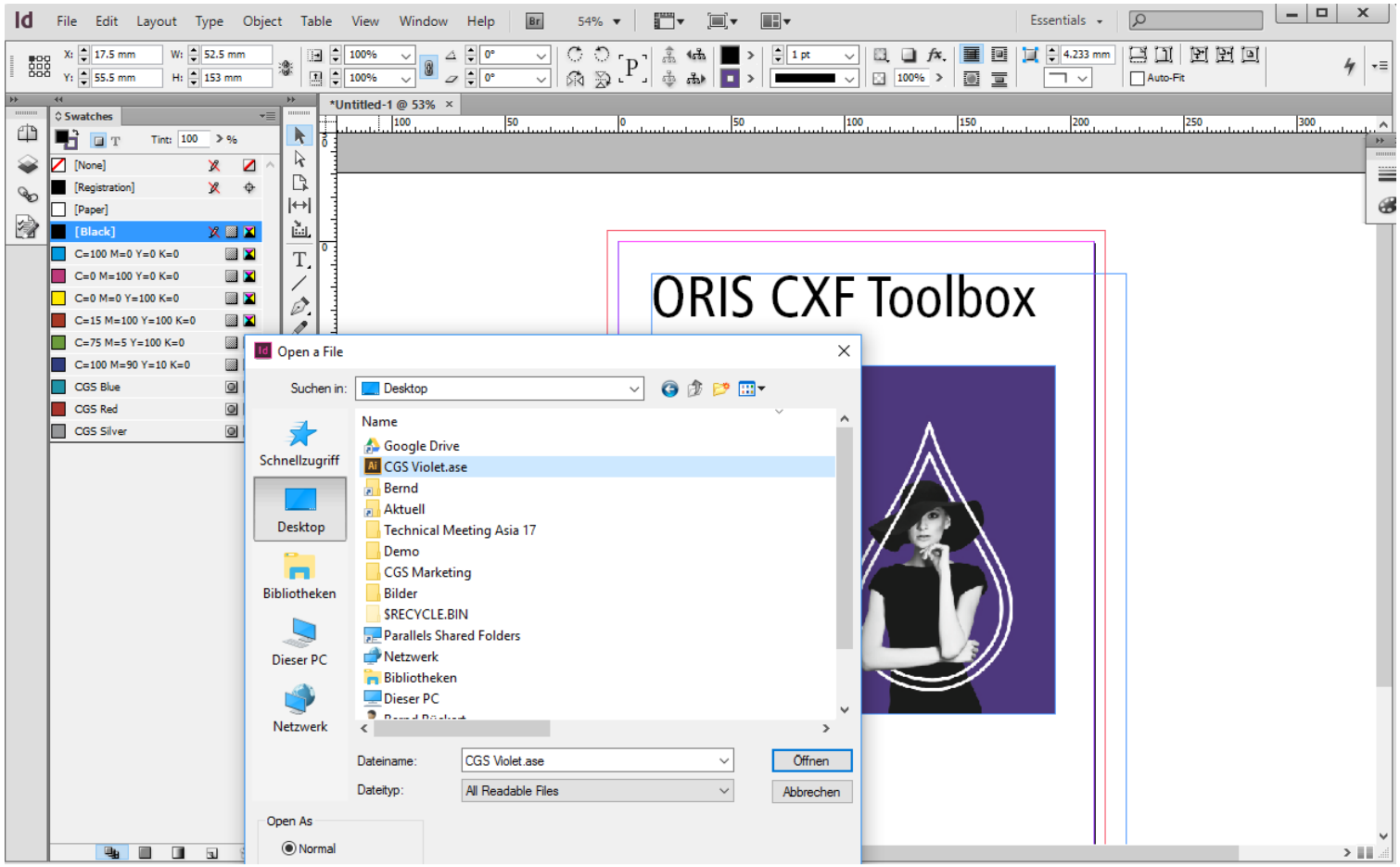
- Step by Step:

Export Adobe Swatch Exchange Files for CS



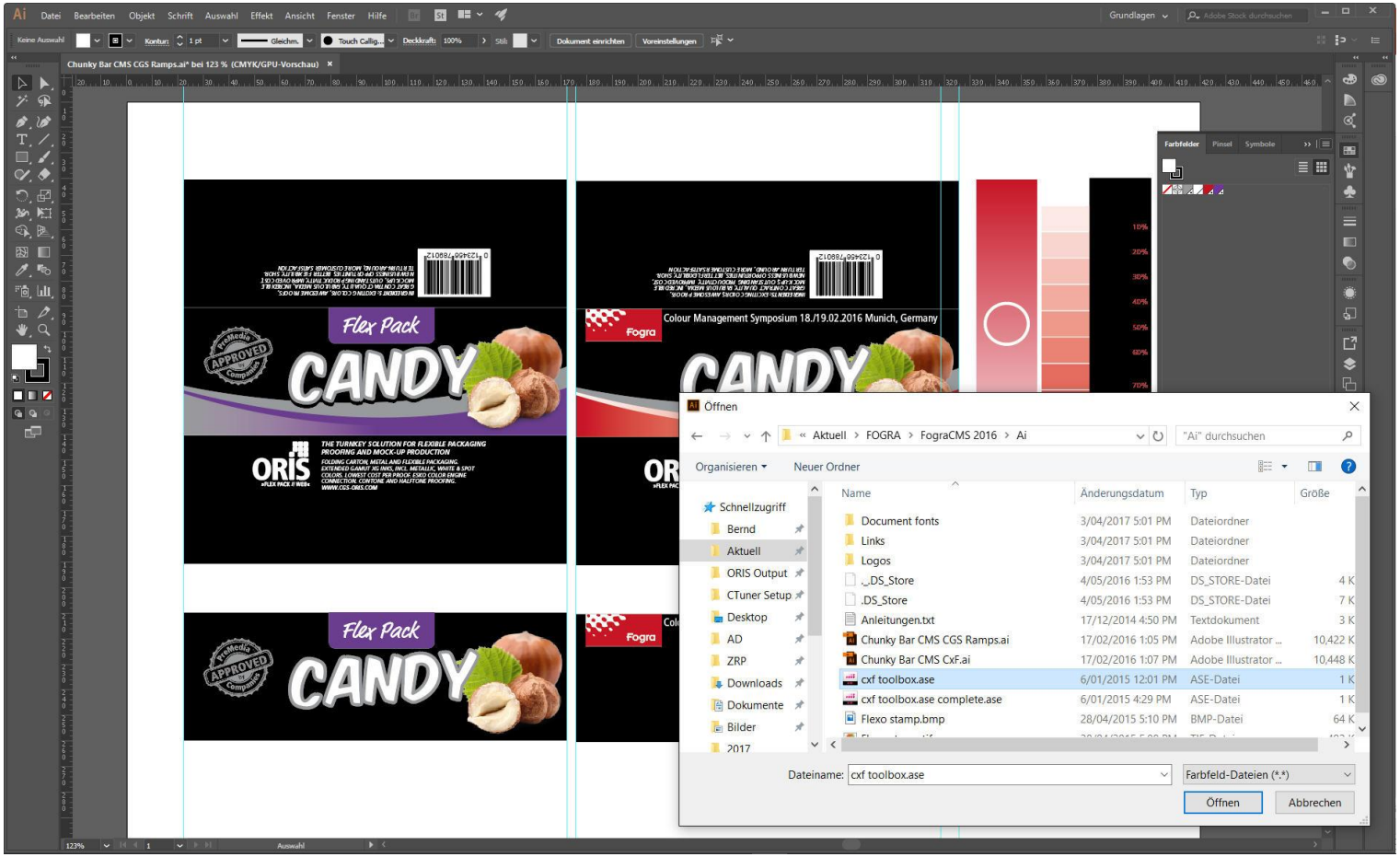
Technology Overview

- Use exported ASE data in Adobe Indesign



Technology Overview

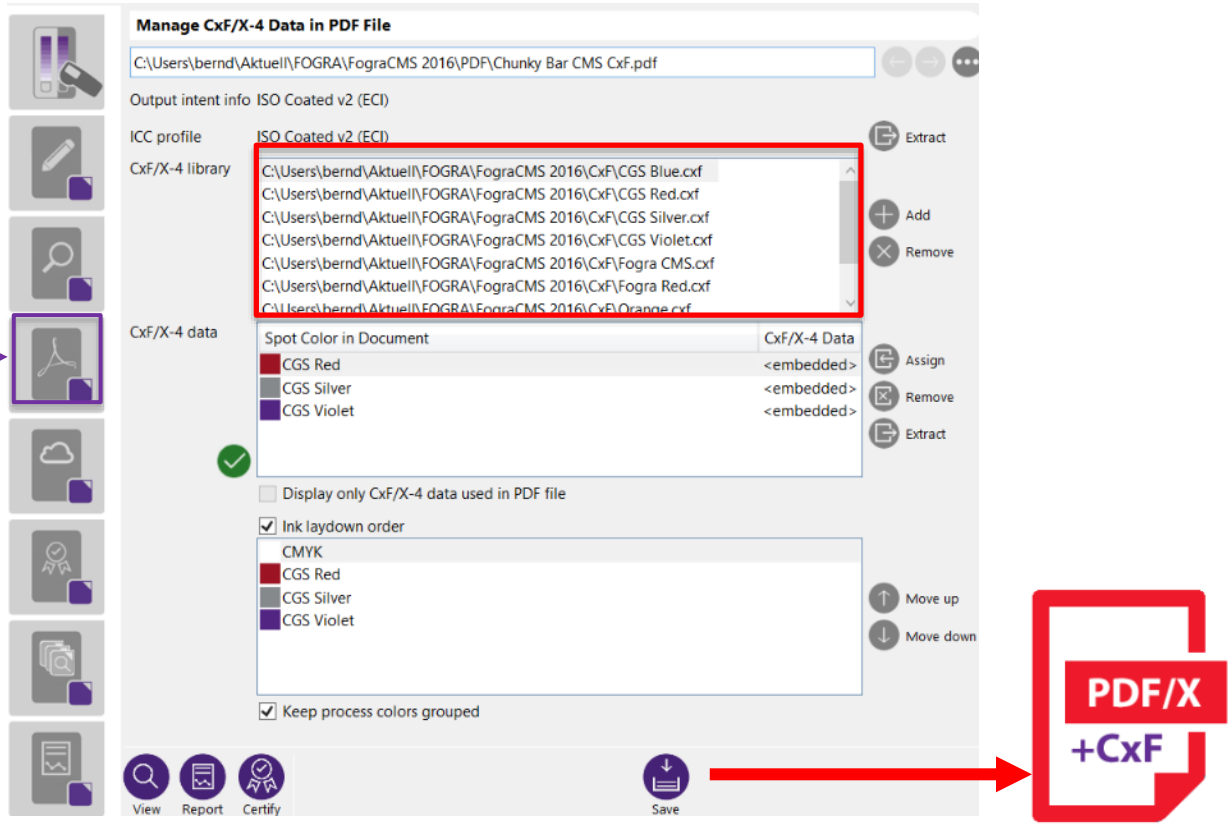
- Use exported ASE data in Adobe Illustrator



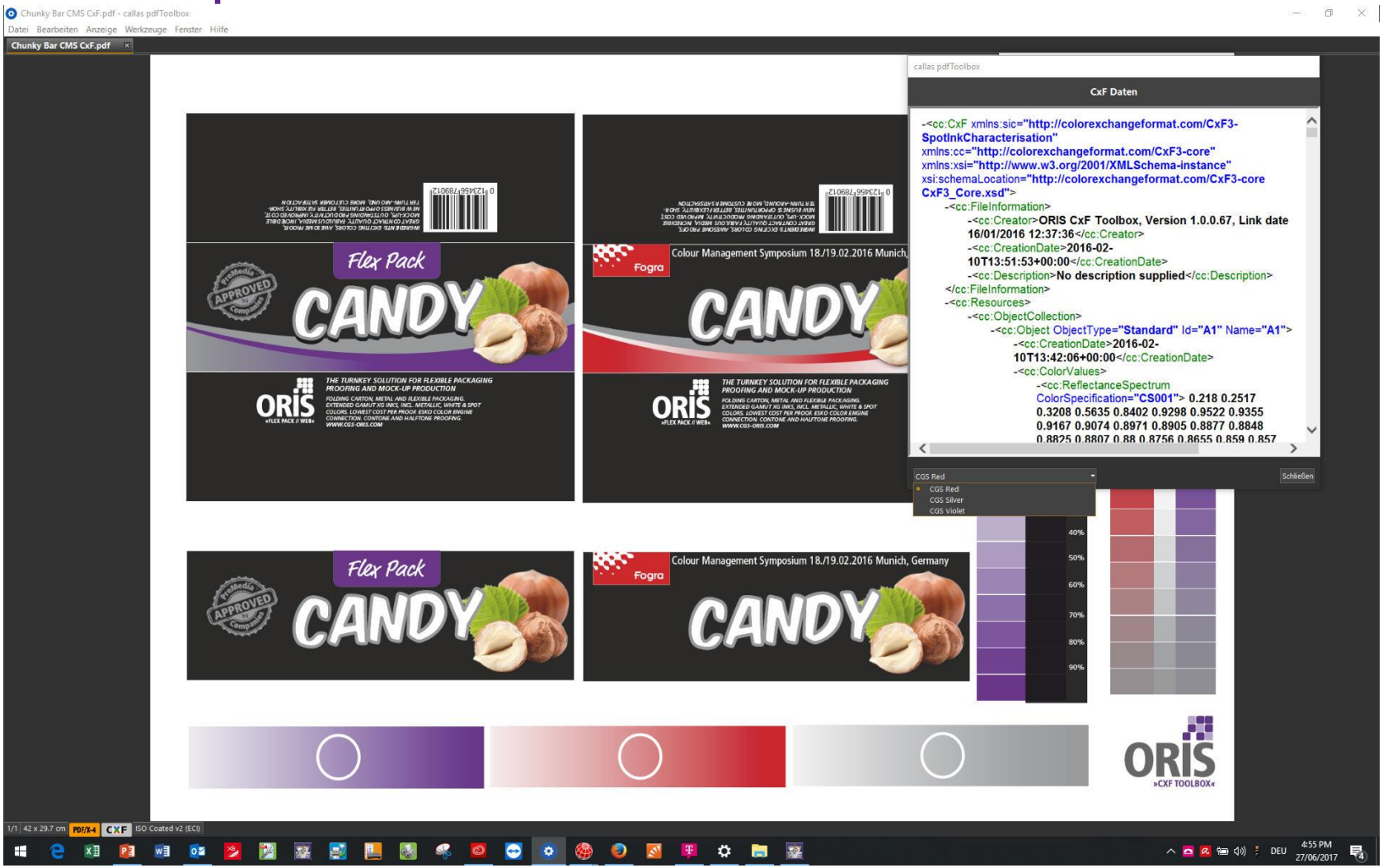
Technology Overview

- Step by Step:

Manage and replace the ASE with CxF in the PDF file



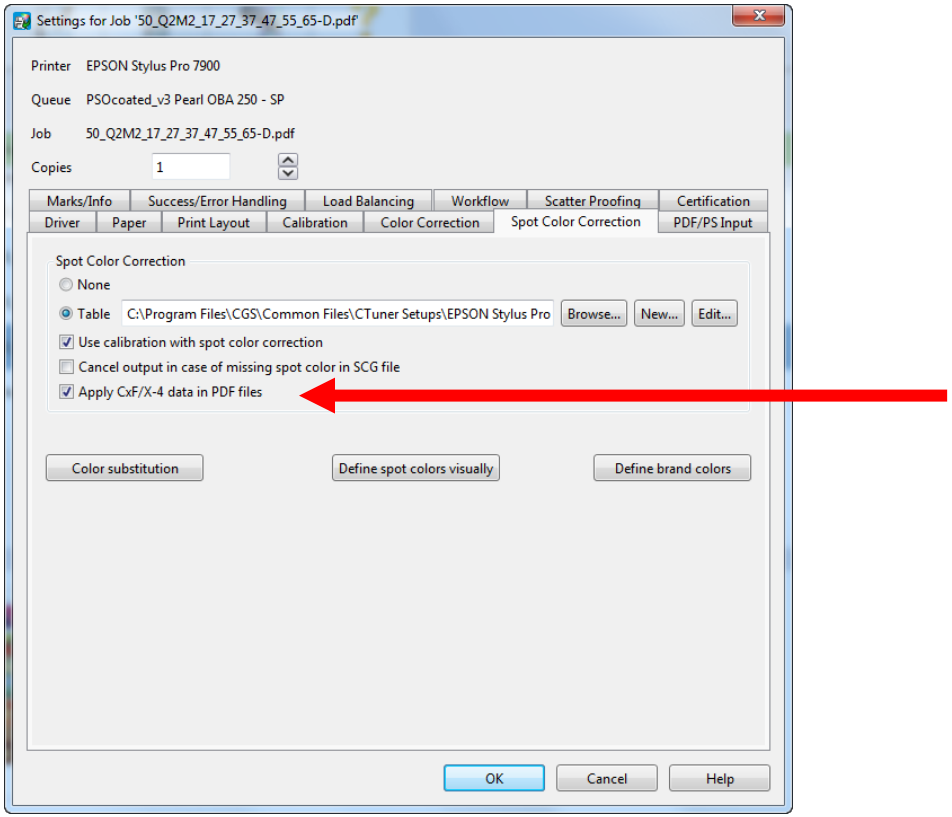
Callas pdf Toolbox



Callas pdf Toolbox

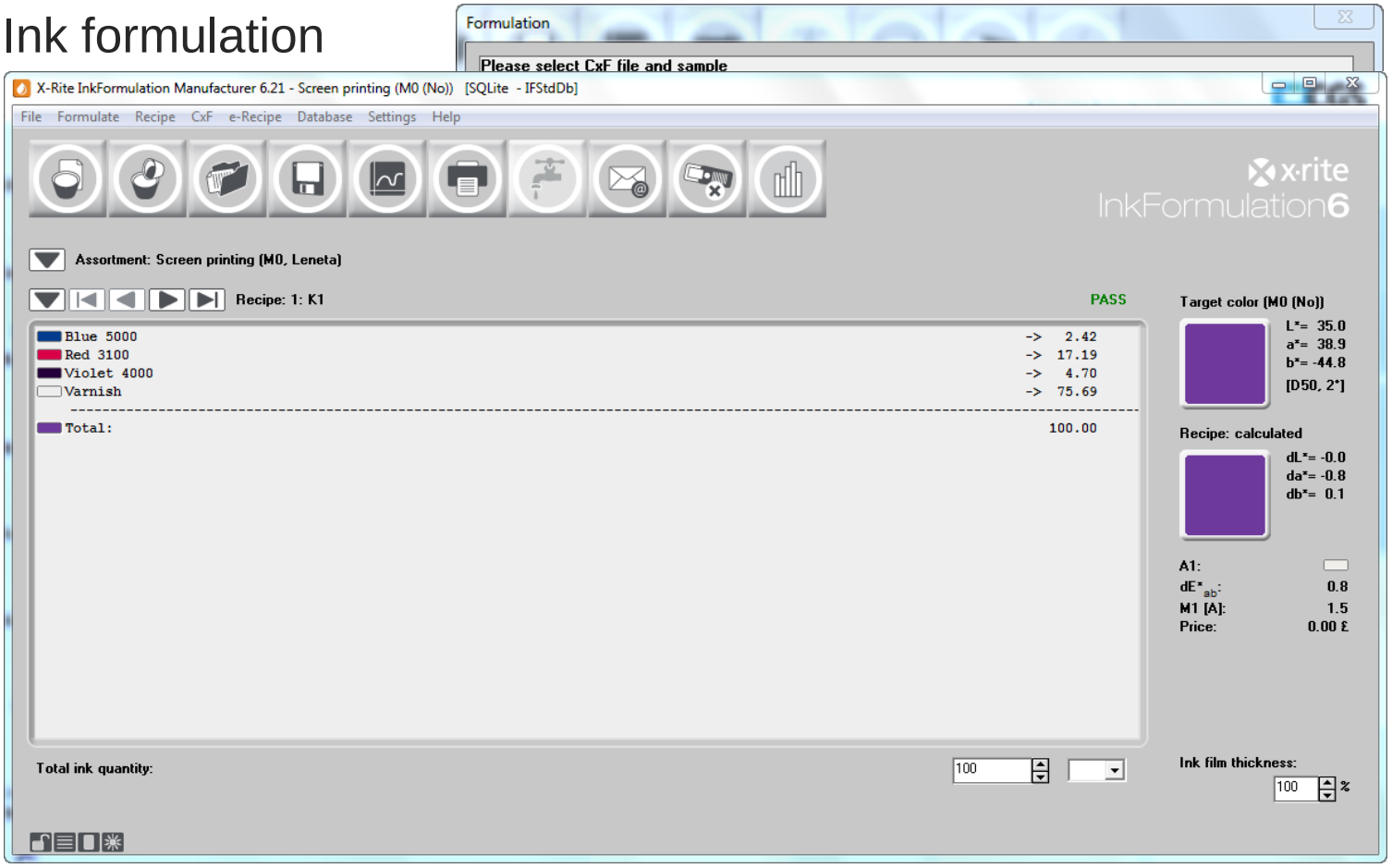
CxF in the your workflow:

- Proof RIP´s simply uses CxF data embedded



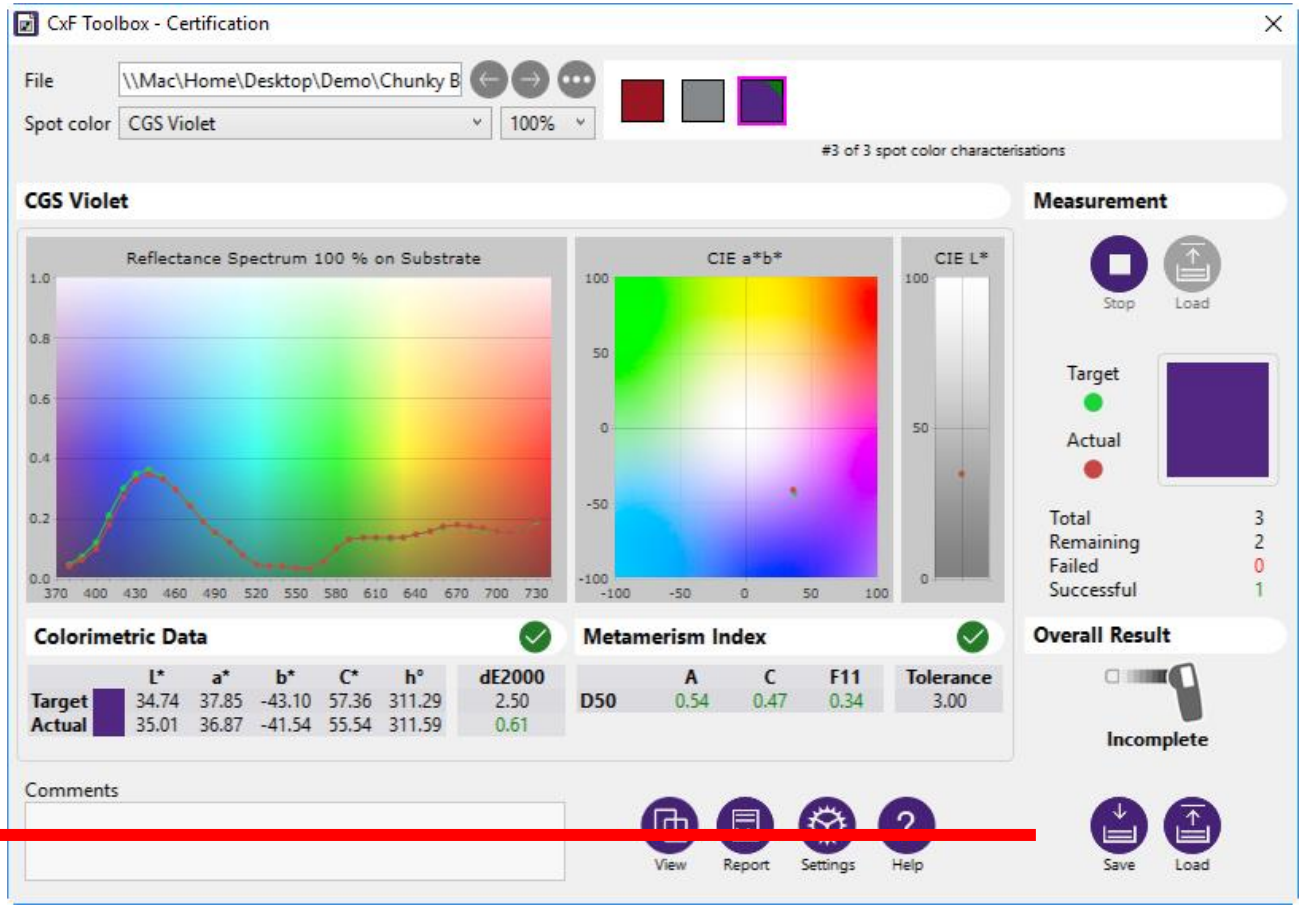
Using CxF in other Applications:

- Ink formulation



Using CxF for validating

- Step by Step:



Technology Overview

- ISO-standard files to communicate color across the entire supply chain will insure a faster process, shorter set-up times, fewer errors, and (most importantly) consistent brand color fidelity at multiple points of sale - even under widely varying lighting and other environmental conditions.

CxF/X Standard

Managing color across supply chain can be expensive and time consuming, but....

it doesn’t have to be!

Brand Owners can do it themselves, or bring in their suppliers to work together

What we will share today is the result of work from industry leaders of over 10 years of work from Brand Owners, GWG, ICC, and ISO both for PDFX and CxF/X

Who is adapting to this new method?

Industry Support?

www.cxftoolbox.com

Thank you!

International Color Consortium

ABOUT ICC | RESOURCES | INFORMATION | MEMBERS | GETTING STARTED | V4 | iccMAX

MAKING COLOR SEAMLESS BETWEEN DEVICES AND DOCUMENTS

ICC: EVENTS:

- All ICC Events

2017

- Prague Graphic Arts Experts' Day, 29 June
- Prague, 27-28 June
- Tokyo, 19-20 April
- NPES/ICC Print Business Outlook Conference, India, 5 Feb
- Upcoming ICC Meetings

2016

- 2016 ICC DevCon
- ICC Meetings, 4-5 Nov San Diego
- Medical Imaging, 5 Nov San Diego
- Displays & 3D print, 5-6 May Taipei

Proofing and printing documents that include spot inks

In order to test the use of proposed ISO standards to communicate spot colour ink characteristics effectively, an **example PDF document** is available.

The document (see below) includes Silver, Violet and Red inks each with different ink opacity which are used in conjunction with the process inks.

The document's OutputIntent includes CxF data for each of the spot inks and an ICC profile that describes the process inks.

http://www.color.org

CGS www.cgs-oris.com