



Rethinking the Packaging Workflow: Golden Masters and Color Spaces

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COLOR20

get the answers here



Printing Today: Multiple Outputs

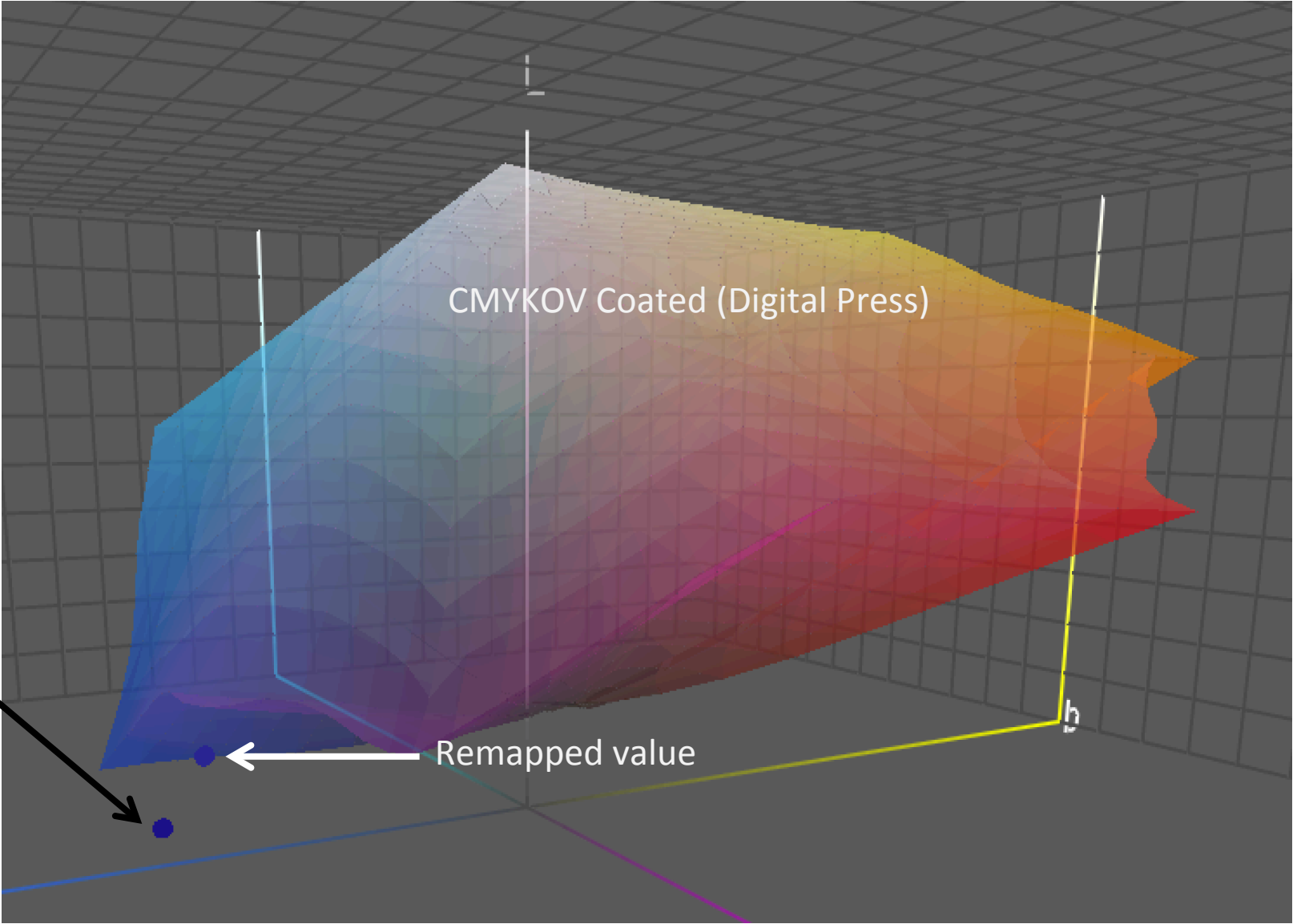


Multiple Destinations = Multiple Conditions

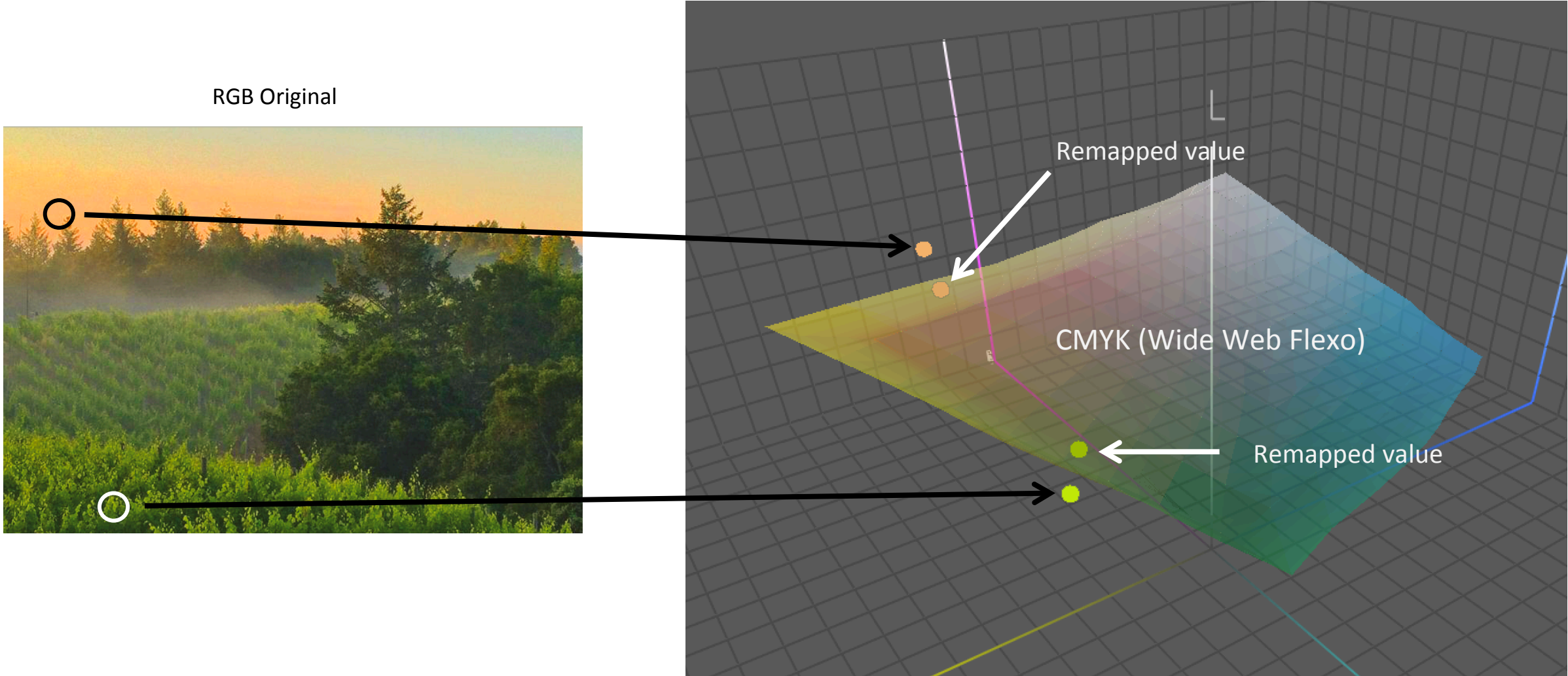
- Different inks and substrates
- Changes in density, hue, tonality, ink trapping
- Change in color mode:
 - CMYK and RGB to 5-, 6-, 7-color process
 - Spot color to CMYK
 - Spot color to multicolor (ECG)
- Change in print order (overprint color)



Color Remapping: Spot Colors



Color Remapping: RGB



Design Complexity = Conversion Challenges

Spot color vector objects

Transparency

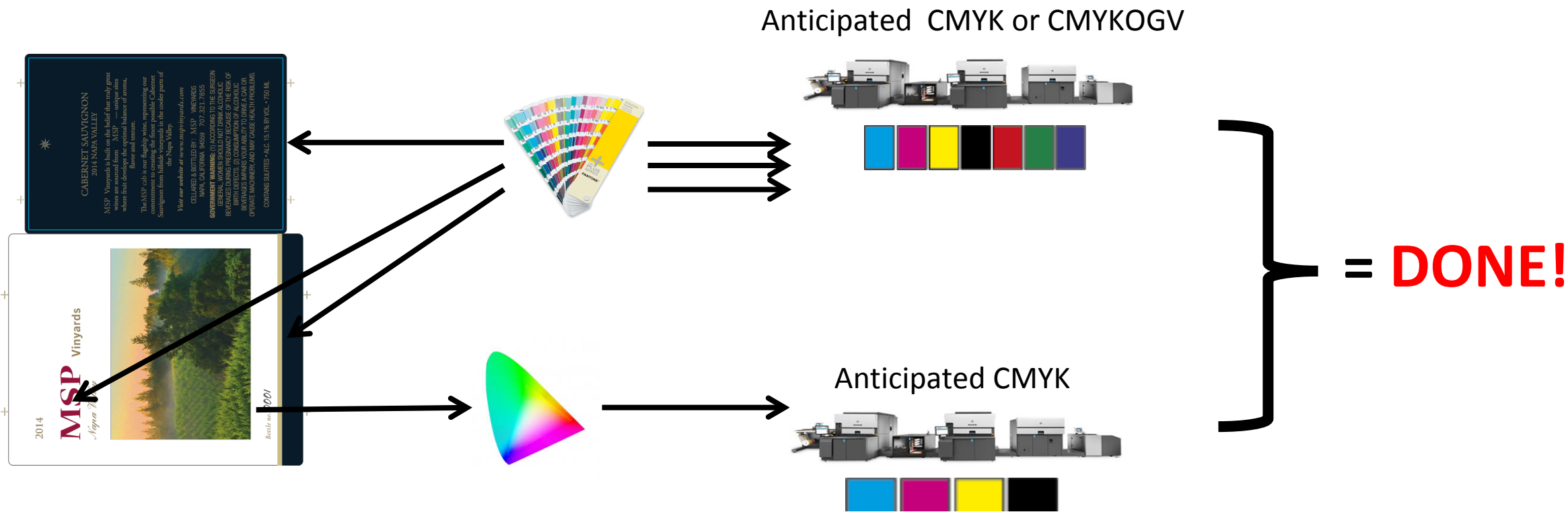


Transparency

CMYK vector object

CMYK image

Early-Binding Normalization: A Reliable Stake in the Ground



But Choices Have Consequences!

Original RGB

CMYK

RGB direct to CMYKOV

For nearly 500 years, the white Muscat of Alexandria (Egypt, not Virginia) grapes have been grown and distilled in the Bolivian mountain altitudes of 6000ft (which is really frigging high) to create a clear, mixable spirit called Singani. The smooth start and invisible finish Mr./Dr. Soderbergh drinks his on this stuff can truly play any poet.

750 ml

GOVERNMENT WARNING: (1) ACCORDING TO THE SURGEON GENERAL, WOMEN SHOULD NOT DRINK ALCOHOLIC BEVERAGES DURING PREGNANCY BECAUSE OF THE RISK OF BIRTH DEFECTS. (2) CONSUMPTION OF ALCOHOLIC BEVERAGES IMPAIRS YOUR ABILITY TO DRIVE A CAR OR OPERATE MACHINERY, AND MAY CAUSE HEALTH PROBLEMS.

EXPORTACIÓN: Elaborado y embotellado en origen por S.A.I.V. LTDA. NIT 1024725024 R.S. SENASAG 09-01-03-14-0003 Santa Ana, Provincia Cercado, Tarja - Bolivia, www.casa-real.com

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SINGANI 63
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BRANDY
80 PROOF /
ALC. 40%
BY VOL.

si

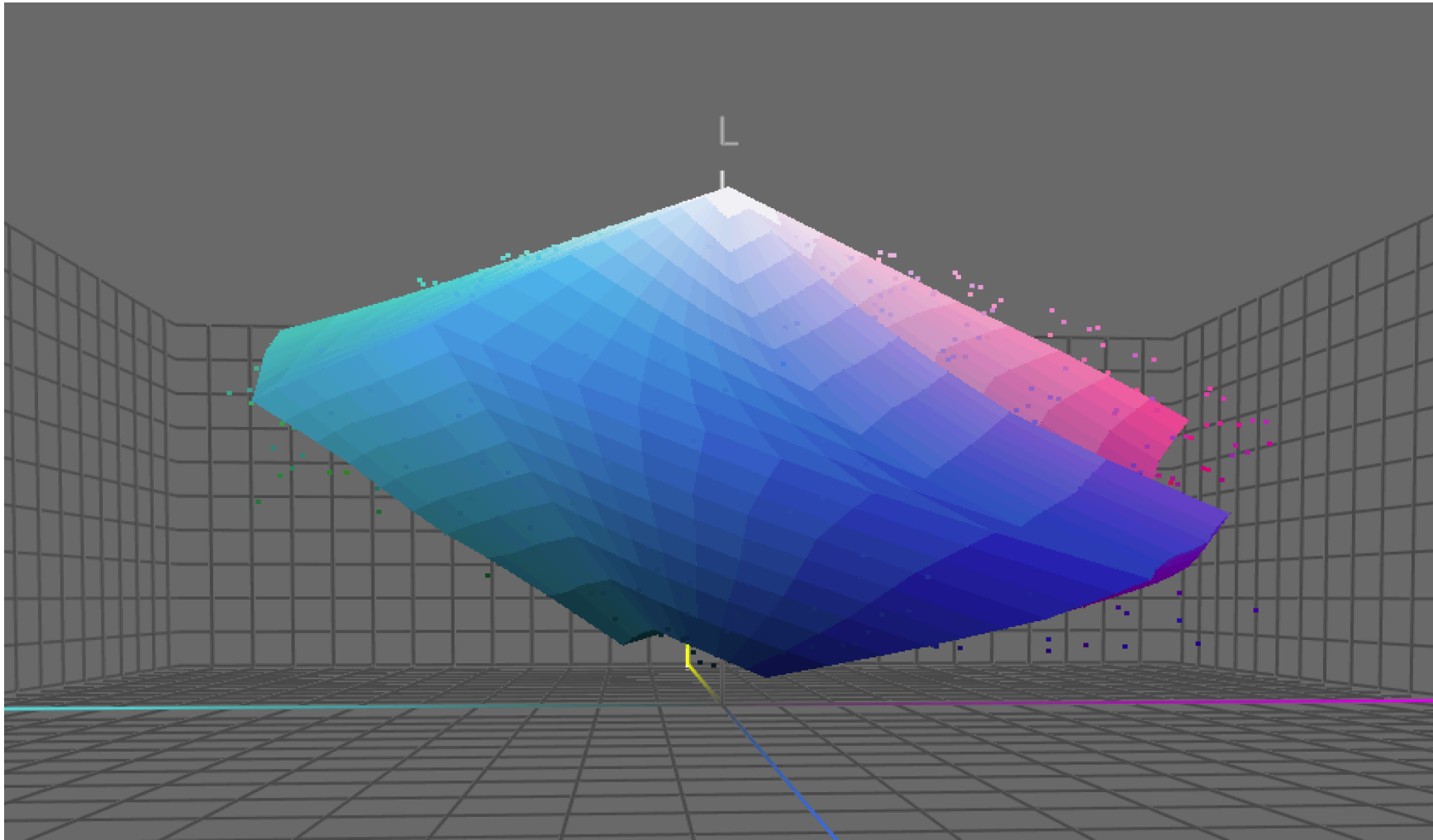
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Future Printability?



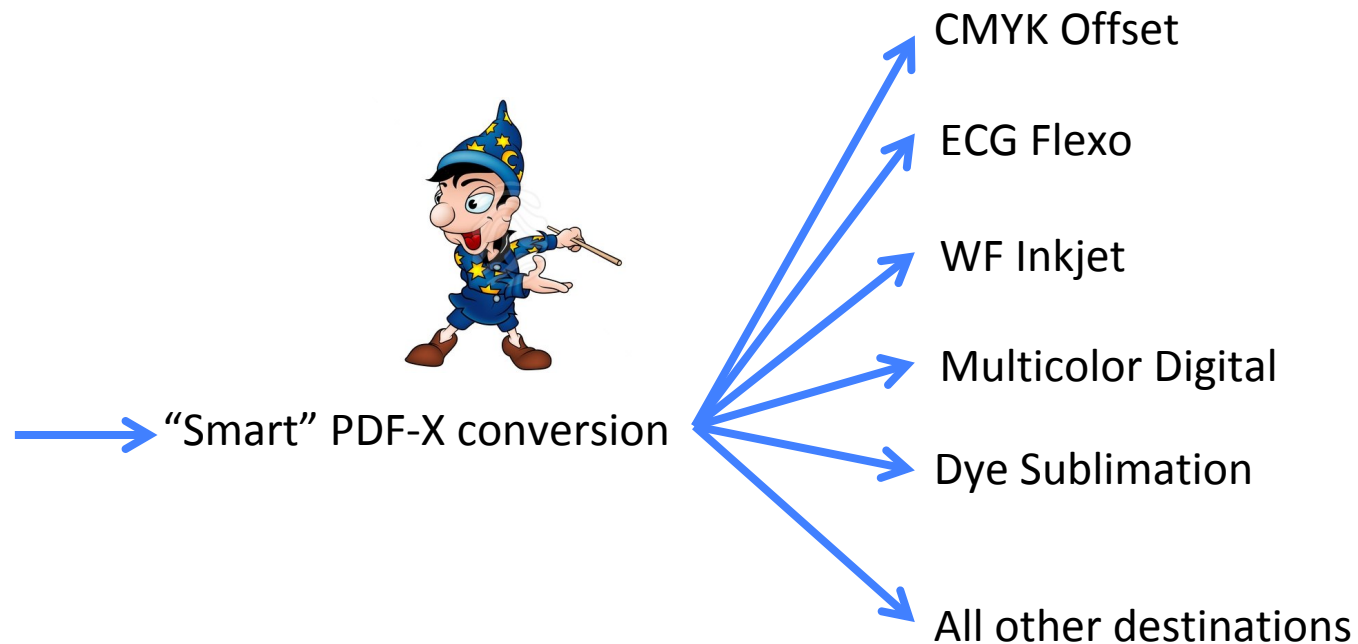
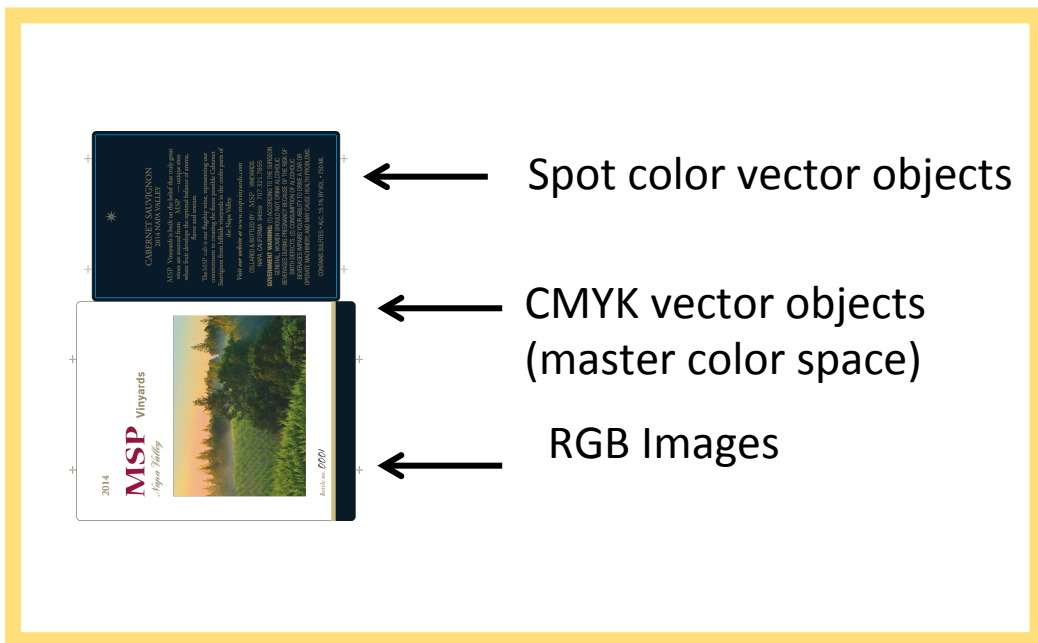
Early-Binding Normalization: a Good Tradeoff?

- Reduces complexity up front
- Minimizes need for special skills or software
- Comforting predictability
- May distort or diminish customer colors
- May later require difficult retouching to match new targets
- Risks losing track of original colors



Late-Binding Conversion: One File, Many Outputs

Source Document



Late-Binding Conversion: Pros and Cons

- Maximizes flexibility
- Preserves color integrity, respects customer intentions
- May fail to account for “mechanical” factors requiring manual intervention
- May require specialized software



What is a “Golden Master” PDF?

An optimized, flexible source file:

- Errors fixed
- Retains original design colors
- Original fonts (not outlined)
- Usually flattened
- Data-rich—all objects tagged, spot & process colors defined



Why a “Golden Master”?

- Serves as a reliable, permanent record of brand owner's intentions
- Retains as much flexibility as possible
- Saves time
- Makes more effective use of skilled prepress labor

The Data-Rich Master: Define all colors!

Diagram illustrating the color management workflow for a print master, showing various color calibration targets and their corresponding color profiles.

Color Calibration Targets and Profiles:

- Reflex Blue-50%
- Reflex Blue-Solid
- Document Output Intent: ISO Coated v2 ECI.icc
- Reflex Blue-Cyan 100/100 Overprint
- Reflex Blue-Cyan 50/100 Overprint
- 6C characterization/PC bar
- CxF/X4 spot color characterization (solids/tints/overprints)
- Red 032-Solid
- Tagged RGB Images sRGB.icc
- Tagged CMYK Vector objects ISO Coated v2 ECI.icc

The diagram shows a layout for a cat food product box, featuring the brand name **VLEES** and the product description **BROKJES IN SAUS**. The layout includes various color calibration targets and a color bar, all defined by the specified color profiles.

Have Profiles for any Intended Print Condition



PDF-X4: A Big Container



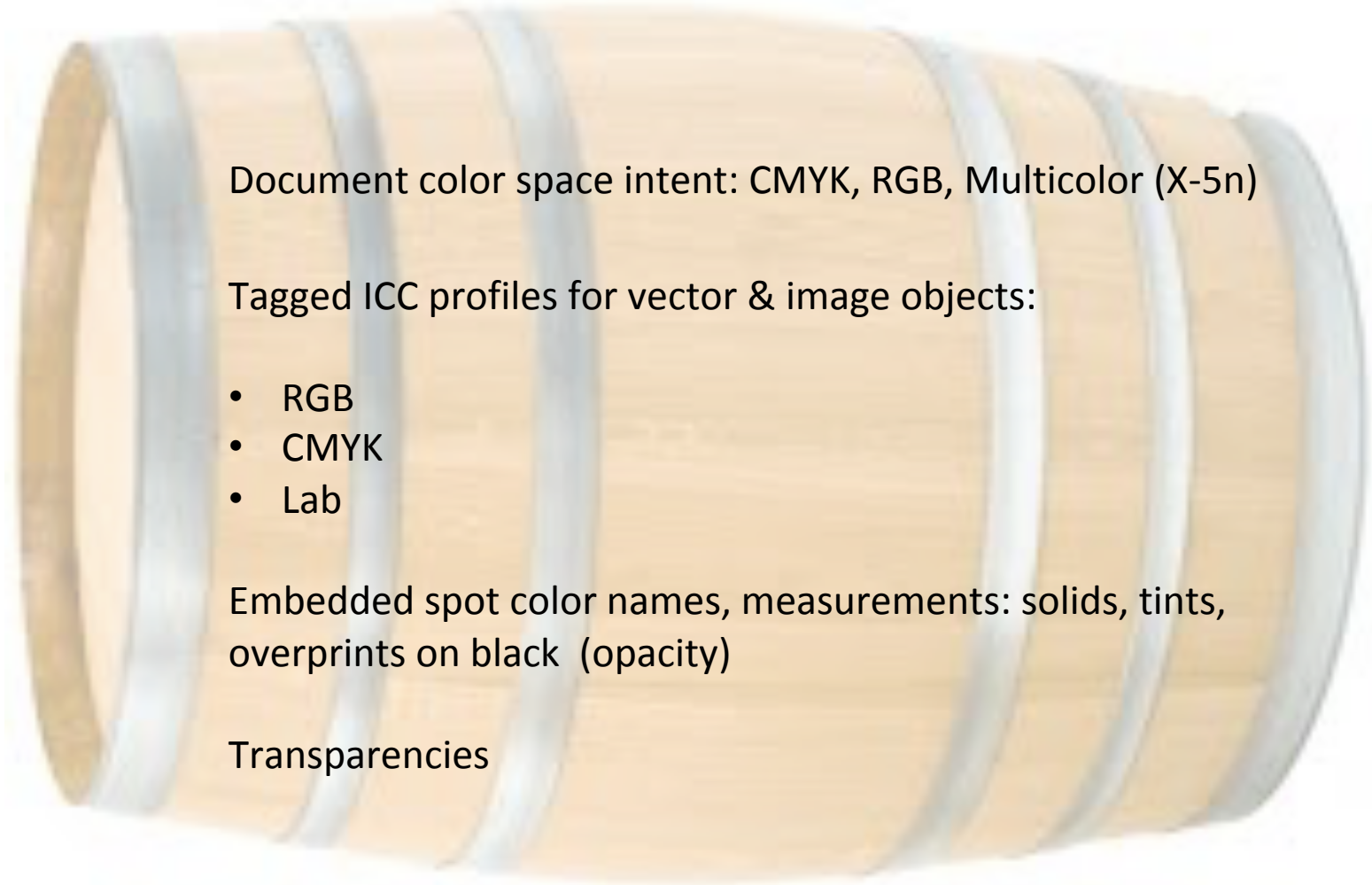
Document color space intent: CMYK, RGB, Multicolor (X-5n)

Tagged ICC profiles for vector & image objects:

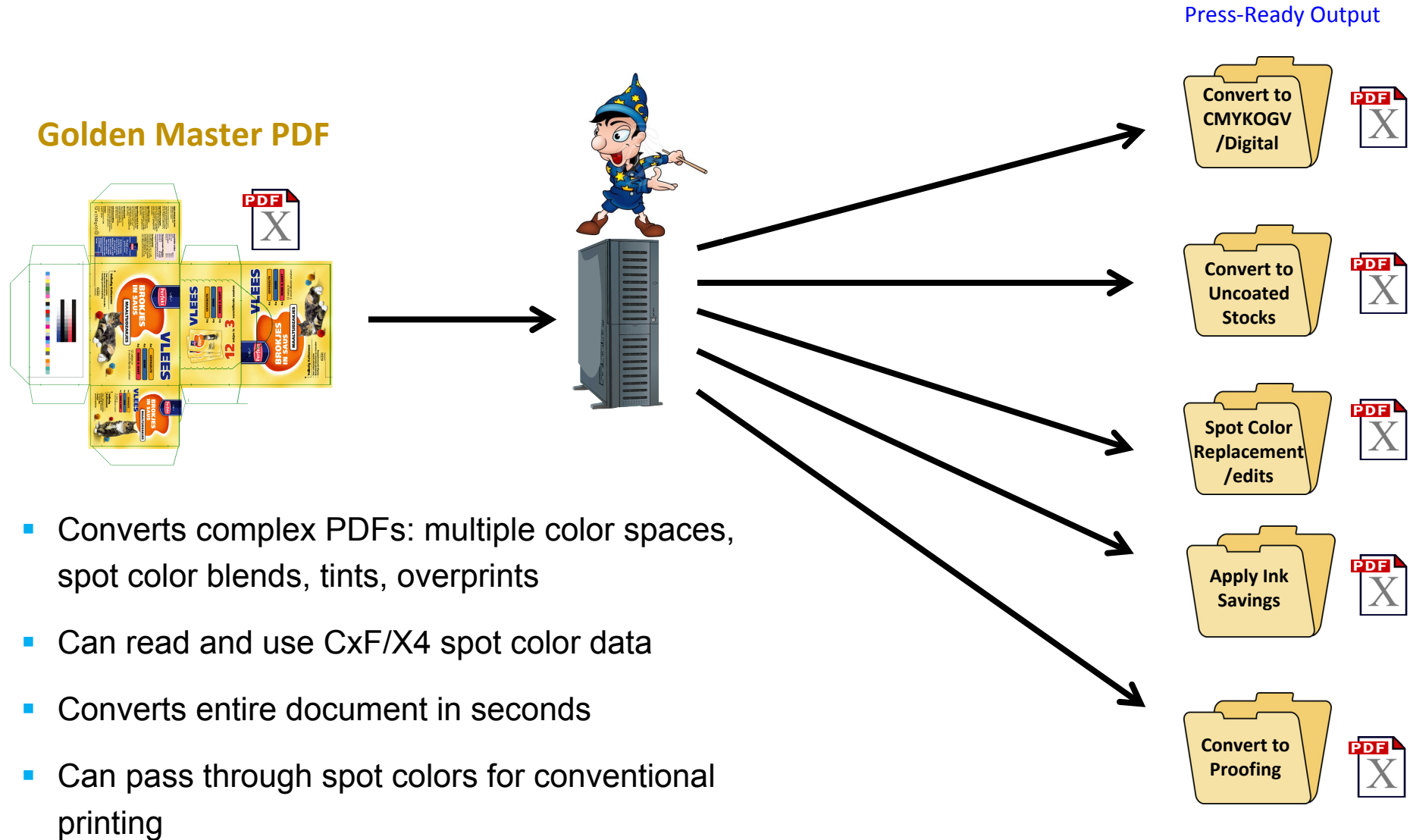
- RGB
- CMYK
- Lab

Embedded spot color names, measurements: solids, tints, overprints on black (opacity)

Transparencies



Automate: Dedicated Color Server



- Converts complex PDFs: multiple color spaces, spot color blends, tints, overprints
- Can read and use CxF/X4 spot color data
- Converts entire document in seconds
- Can pass through spot colors for conventional printing
- Can be highly accurate


Communicate: Spot Color Reports

Configuration: To_Offset_CMYKOGV
Target Profile: Miraflex Target XG CMYKOGV-G7+ISO20654.icc
Source Data: Designer


Average dE00: 0.5
 Maximum dE00: 5.6 (Singani Orange)
 Median: 0.1
 dE00 < 1: 78.9%
 dE00 < 2.5: 96.7%

Name	Conversion:	Target Lab	7CLR	Lab (Profile)	dE00	dE76
HP Spot Gold	Designer	58.00 3.00 29.00	0.0 17.9 63.2 40.8 0.0 0.0 0.0	57.99 3.01 29.00	0.0	0.0
P872MR60001	Designer	58.00 3.00 29.00	0.0 17.9 63.2 40.8 0.0 0.0 0.0	57.99 3.01 29.00	0.0	0.0
Starfield Blueslines ZE	Preserved	-	-	-	-	-
Starfield Blue ZE	Designer	24.10 -2.40 -16.30	76.8 39.3 0.0 72.4 0.0 0.0 0.0	24.19 -2.43 -16.23	0.1	0.1
Starfield 872 ZE	Designer	85.00 0.00 30.00	0.0 5.7 43.7 5.7 0.0 0.0 0.0	84.90 0.03 29.86	0.1	0.2
Lagier Blue ZE	Designer	31.80 -6.40 -14.80	58.8 17.0 0.0 69.1 0.0 0.0 0.0	31.83 -6.34 -14.87	0.1	0.1
Lagier Green ZE	Designer	45.13 -3.59 6.70	0.0 0.0 24.4 68.6 0.0 0.0 0.0	45.13 -2.72 6.88	1.1	0.9
Coppola Blue ZE	Designer	30.93 3.71 -27.54	50.3 0.0 0.0 52.5 0.0 0.0 58.0	30.99 3.72 -27.40	0.1	0.2
Eggshell Cream ZE	Designer	93.16 1.29 11.19	0.0 0.0 14.1 0.0 3.8 0.0 0.0	92.15 1.22 11.02	0.6	1.0
Cider Grn ZE	Designer	59.44 -19.96 25.59	40.8 0.0 68.9 27.1 0.0 0.0 0.0	59.40 -20.02 25.62	0.0	0.1
Cider Red ZE	Designer	47.82 39.82 21.00	0.0 73.6 57.5 24.8 0.0 0.0 0.0	47.81 39.66 20.87	0.1	0.2
Capsule Red ZE	Designer	37.36 60.51 41.99	0.0 100.0 0.0 25.9 85.0 0.0 0.0	37.48 60.19 41.95	0.1	0.3
Pana Gray ZP	Designer	68.70 0.60 3.30	0.0 5.1 13.1 33.6 0.0 0.0 0.0	68.68 0.68 3.32	0.1	0.1
Pana Black ZP	Designer	26.21 -0.77 0.82	0.0 0.0 5.9 92.4 0.0 0.0 0.0	26.25 -0.79 0.88	0.1	0.1
Pana Orange ZP	Designer	61.94 28.91 41.86	0.0 0.0 0.0 24.9 62.3 0.0 0.0	61.86 30.11 41.47	0.8	1.3
Spirit Orange ZP	Designer	63.30 47.10 48.97	4.8 35.6 0.0 0.0 71.3 0.0 0.0	63.31 47.18 49.03	0.0	0.1
Spirit Green ZP	Designer	59.60 -57.20 0.84	0.0 7.8 10.4 0.0 0.0 86.5 0.0	59.61 -57.24 0.84	0.0	0.0
Breck 303 ZP	Designer	32.40 -8.70 -11.50	48.4 0.0 0.0 75.1 0.0 0.0 0.0	32.41 -8.75 -11.54	0.0	0.1
OneEight Black ZP	Designer	18.00 -0.00 -0.30	0.0 0.0 0.0 100.0 0.0 0.0 0.0	20.01 0.00 -0.00	1.4	2.0
Messina Cream ZP	Designer	82.80 -2.00 15.13	0.0 0.0 25.0 14.1 0.0 0.0 0.0	82.96 -2.88 15.03	1.1	0.9
Rich K ZP	Designer	17.00 0.60 0.80	0.0 0.0 0.0 100.0 0.0 0.0 0.0	20.01 0.00 -0.00	2.4	3.2

Communicate: Accurate Proofing



The image cannot be displayed. Your computer may not have enough memory to open the image, or the image may have been corrupted. Restart your computer, and then open the file again. If the red x still appears, you may have to delete the image and then insert it again.



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ISO 12647-7 Contract Proof "Media Wedge"

Approuvé par :

Données de réf. :

Profil de référence :

Imprimante :


Profil du vérificateur :

Système d'impression :

Instrument : EFI ES-2000

Date/Heure : 19 août 2016 11:31:27

Critères	Mesuré	Tolérance	Statut
Moyenne toutes pièces	1 dE 3	OK	
Maximum toutes pièces	4 dE 6	OK	
Monochrome blanc	1 dE 3	OK	
Cyan	1 dE 5	OK	
Magenta	1 dE 5	OK	
Jaune	3 dE 5	OK	
Noir	0 dE 5	OK	
Diff. de teinte pic max. CMJN	1,1 dH 2,5	OK	
Diff. de teinte max. gris	0,6 dH 1,5	OK	





Dos and Don'ts

- DO always have or make a “package” with all job assets
- DON'T have customers make PDFs or convert colors—that's *your* job
- DO assume that variety of print and virtual outputs may be used
- DON'T reflexively convert RGB images or designs to CMYK
- DO make sure that all objects are correctly tagged with ICC profiles
- DO export Golden Master design as PDF-X3 or higher
- DO use smart color server technology to automate PDF conversions

Summary:

- Customer expectations guide the process; target color to serve *their* needs
- Preserve master documents with original customer art and colors intact. When in doubt ask for “packages” with all assets included.
- Make master PDFs data-rich: Output intent, all objects tagged, spot colors defined, with CxF/X4 embedded. Think PDF-X4.
- Target and convert color at the end of the workflow for the specific output condition
- Master current color management and PDF technology to leverage the power of the Golden Master.



THANK YOU

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COLOR20



get the answers here

