

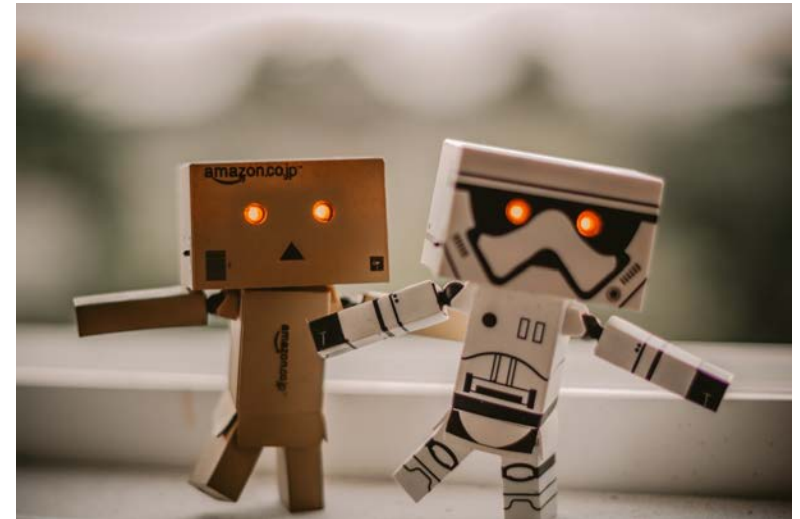
G7/G7+ Above and Beyond Four Colors!



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October 2026*

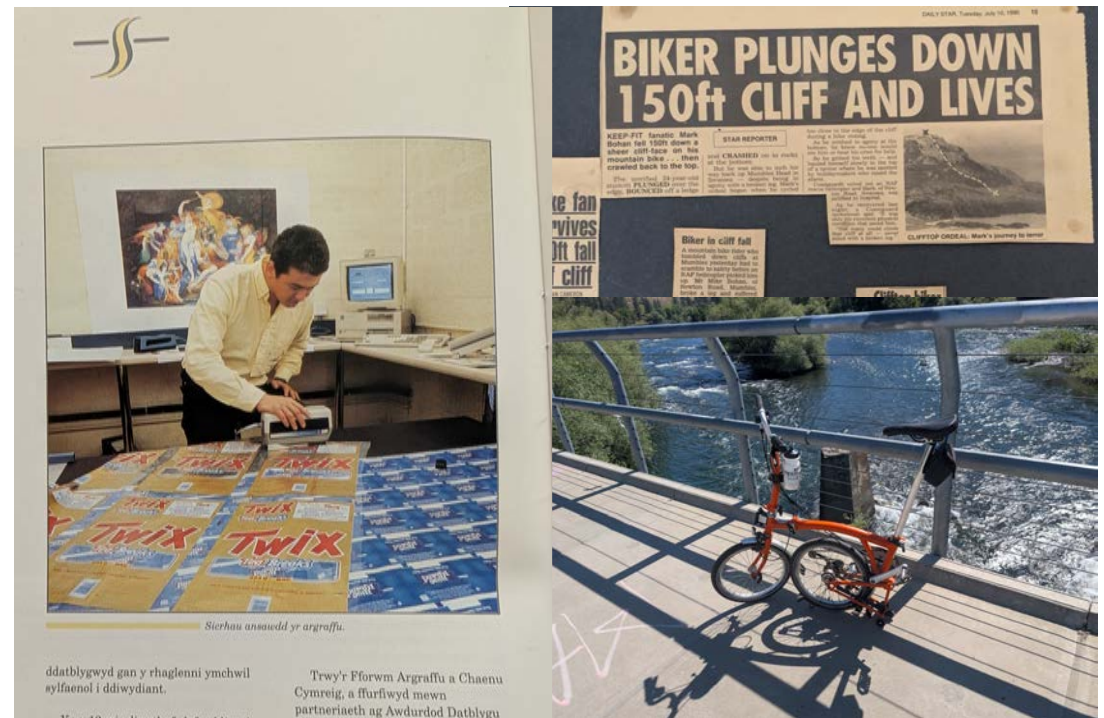
Session overview

- Printing outstanding color is only part of the process
- Look at G7 and G7+ to get the process great
- What do you do to take it to the next level?
- Many exciting and innovative new solutions available today
 - Many different vendors to thank and use their samples
 - Skip some technologies that Jeff will speak about tomorrow!
- Need to be able to sell it!!!!!!

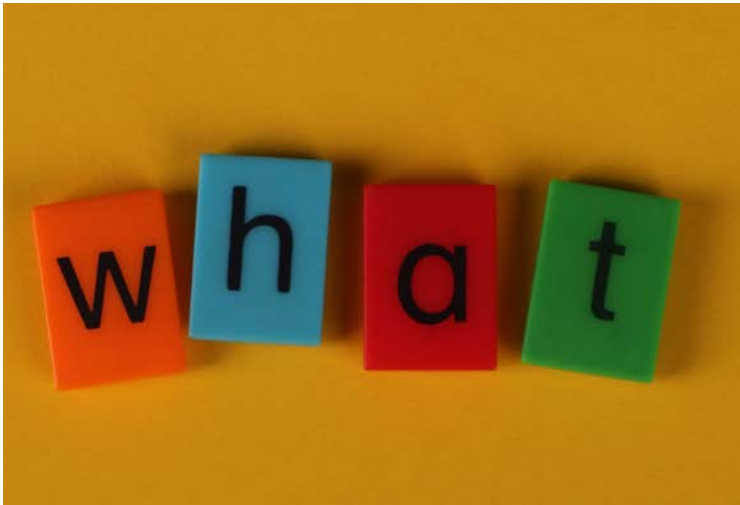


Brief intro

- Research background in the UK
- Ran technical operations at PIA
- Heidelberg
- Konica Minolta
- Cycling!!
 - 25 states in the last seven years



What is G7 / G7+



- Defines a “near neutral” appearance
- Controls
 - Tonality
 - Gray balance
- Simple method for calibrating devices
- Shared visual appearance across multiple devices and processes

This gives us the why!

Digital

Ink Jet

Offset

Before



After



Clarifications



G7 is a gray management systems

Balancing tonality and gray balance using curves



G7 is not a color management system

Need to use ICC profiles, device link profiles etc.



ICC profiles that we target are gray balanced

Characterized Reference Print Conditions (CRPC's)
GRACoL 2013

How do we achieve this from a digital perspective?



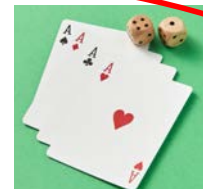
The G7 method CMYK curves

Color management (ICC)



G7 Curves with
Color management

Luck



G7 and G7+

- G7+ is an enhancement on G7
- In many cases will look very similar
 - Notably GRACoL 2013
- Improvements in different areas
 - Banding on high saturated image
 - Subtle changes on tonality
 - Address gray balance on tinted papers

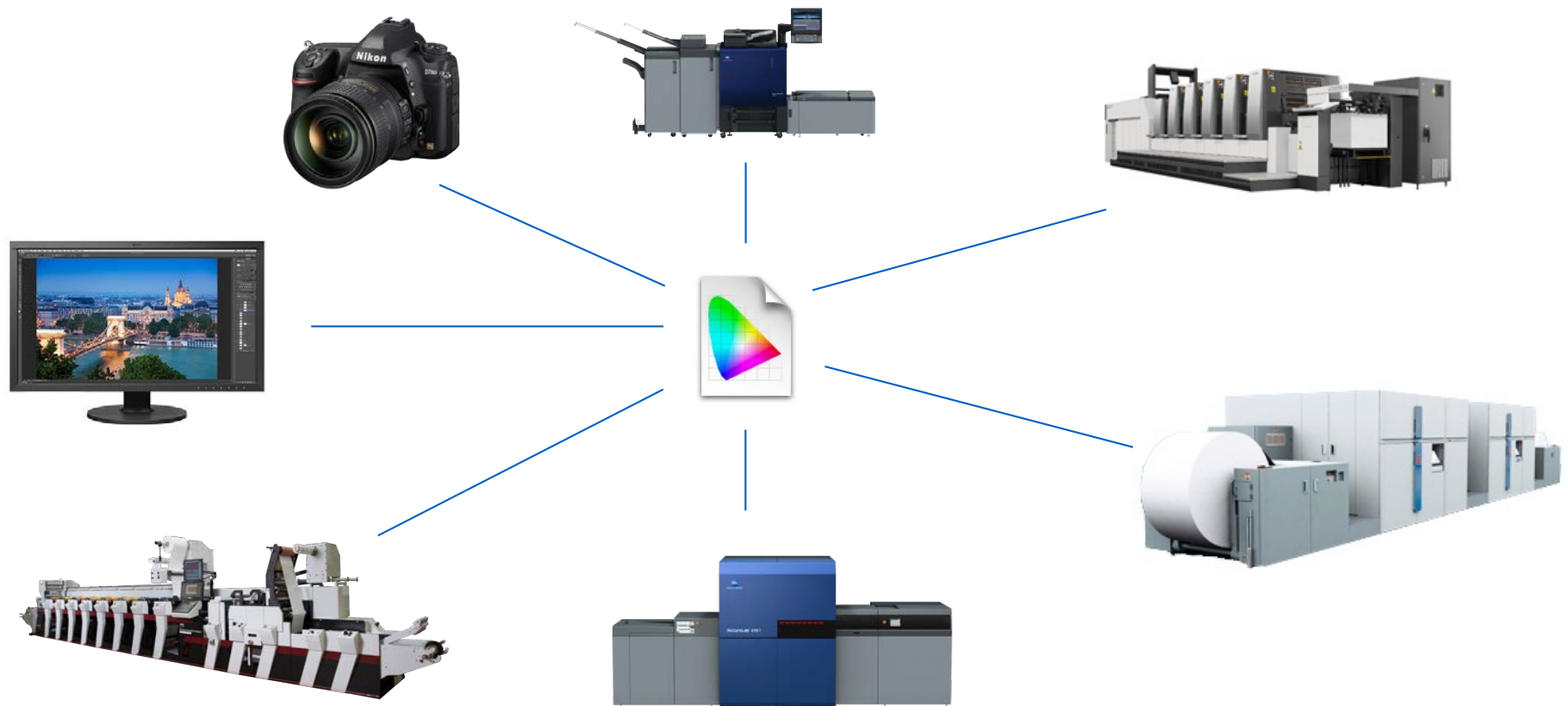


How do we use color management?

- In simple terms, color management is used to obtain consistent color across various devices
 - In addition to tonality and gray balance
 - Used throughout the value chain
- Color conversions are made based on information contained in an ICC profile



High level overview of ICC workflow



01

ICC profiles have the G7 tonality and gray balance baked in

02

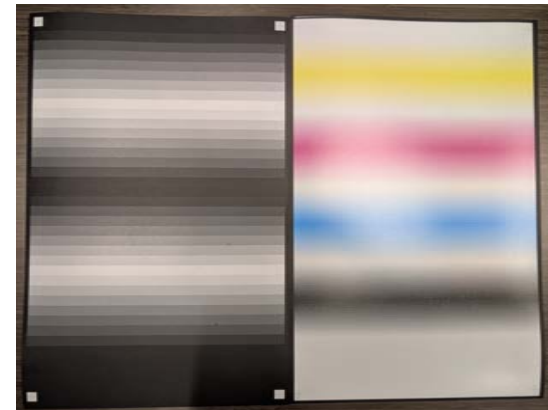
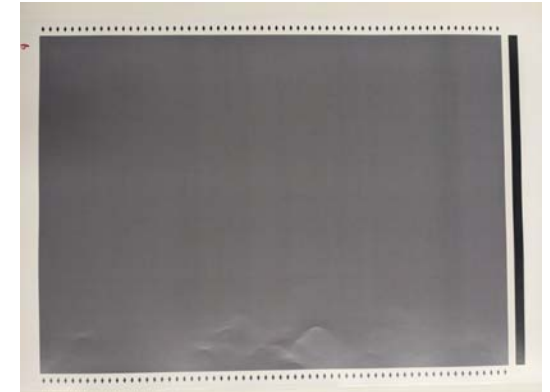
Different ICC profiles as the gamut expands

03

If you print to these, you will also achieve G7

Part 1 of 2: How to achieve accurate color?

- Check the condition of the press
 - Optimization required
 - The most **boring** but important step
 - Need to make a profile when the press is in its best possible condition
- Linearize the press
 - Specific processes dependent on press
 - Automation democratizes the process
- Calibration
 - Depends on the configuration



Part 2 of 2: How to achieve accurate color?

- Profile
 - Built upon the calibration
 - Take your time!
 - Impacted by the instrument, target, software, uniformity
 - And the slide before!
- Check the profile
 - Critically important step
 - Round trip accuracy

Report

Details

User name:		Date / Time:	2025-06-26 16:27:22
Meas. device:	MYIRO-9 (USB)	Target config.:	CRPC6 TC1617 V myiro-9
Printer:	CEC C14010S	Target Profile:	GRACoL2013 CRPC6
Averaging:	OFF	Tolerances:	G7 Colorspace (Press)
Meas. conditions:	Observer: 2° Observer, Illuminant: D50, Mode: ISO 13655 M1, Filter: None		
		Substrate:	Relative

Colors

Summary	Patch	Deviation	Tolerance	Result
Paper white (dE00)	(D1)	0.00	3	Pass
Average (dE00)		0.92	3.5	Pass
Max. 95% quantile (dE00)		1.88	5	Pass
Delta E Max. CMY (dE00)	(C1)	1.23	3.5	Pass
Delta E K (Black) (dE00)	(2G1)	1.45	5	Pass
Delta E Max. RGB (dE00)	(E1)	1.12	4.2	Pass
wdL Ø CMY gray (wdL)		0.40	1.5	Pass
wdL Max. CMY Gray (wdL)	(2G40)	1.06	3	Pass
wdL Ø K (Black) (wdL)		0.76	1.5	Pass
wdL Max. K (Black) (wdL)	(2G15)	1.69	3	Pass
wdCh Ø CMY gray (wdCh)		0.58	1.5	Pass
wdCh Max. CMY Gray (wdCh)	(2G38)	1.42	3	Pass

How do we stay consistent?



Process Control

The number one problem in implementing color management and quality into the workflow is...



Let's go on
a voyage
of discovery





At times less is more!

Create impact with coating



Drip off coating



UV coating on packaging

Color shift, pearlescent and glitter



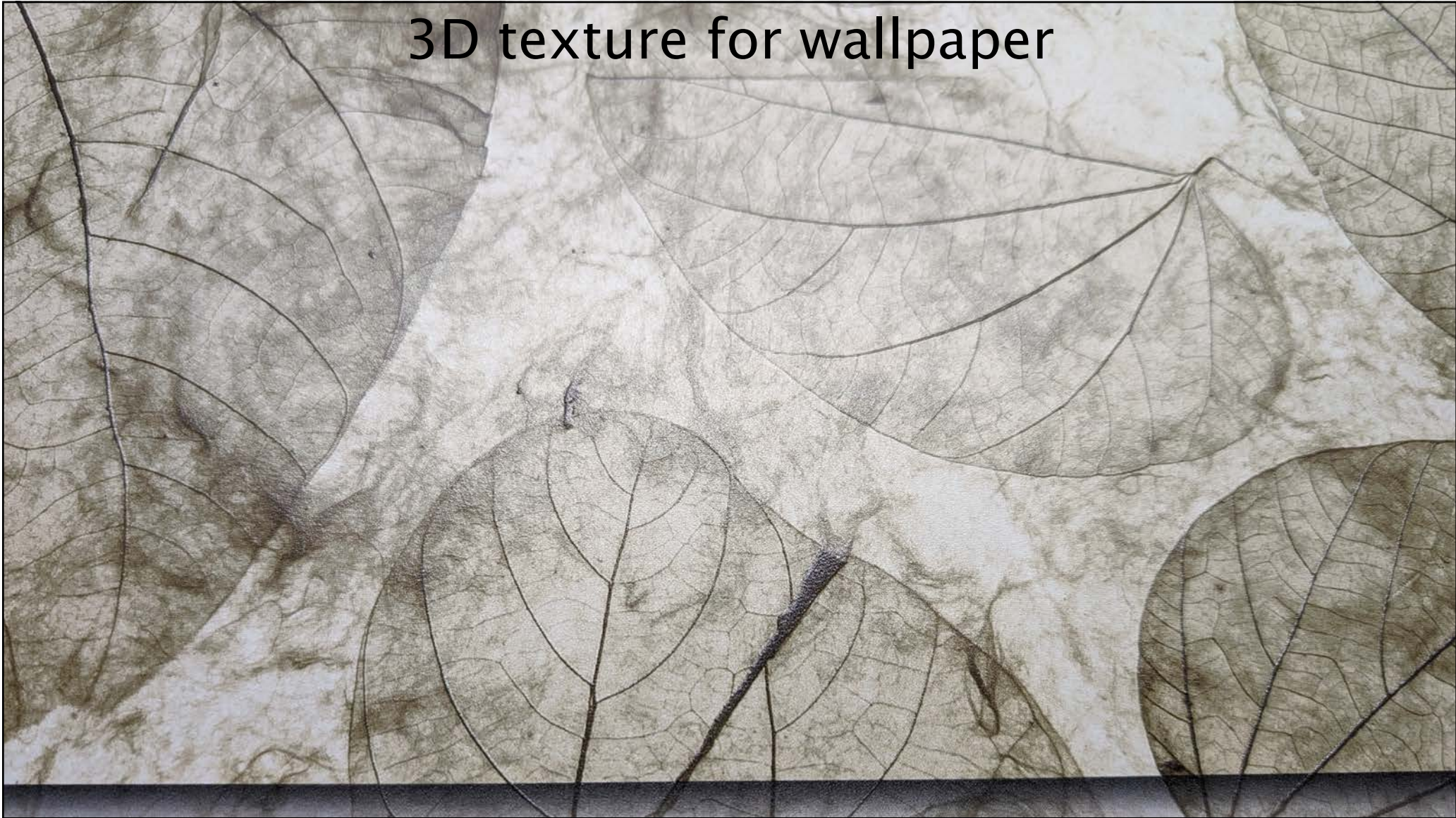
Create texture with embossing



Raised images



3D texture for wallpaper



Different combinations of color



Surface view

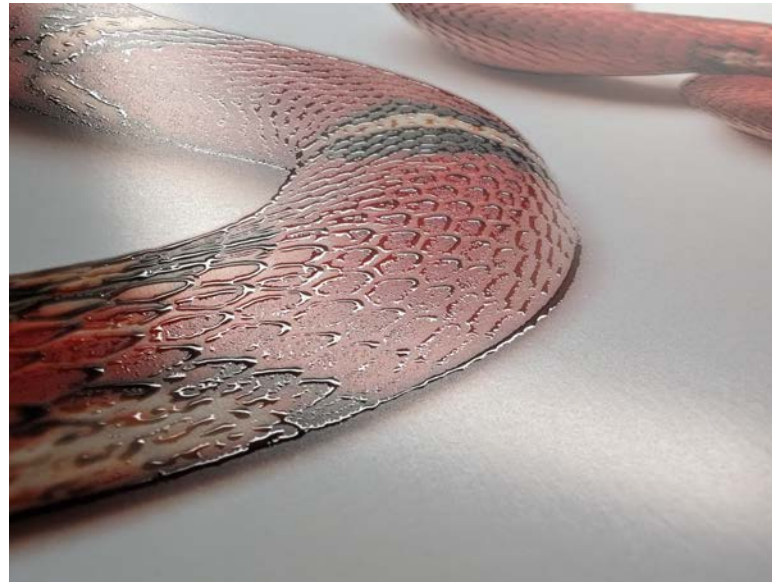


Backlit

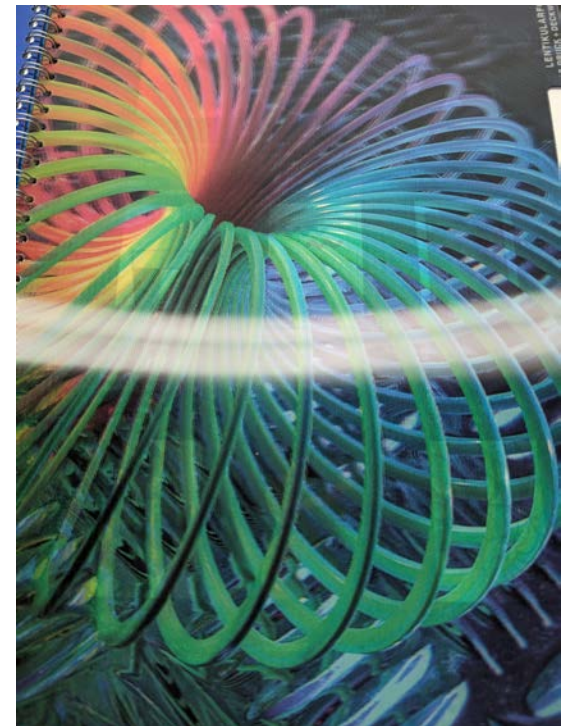


Backlit, reversed and mirrored

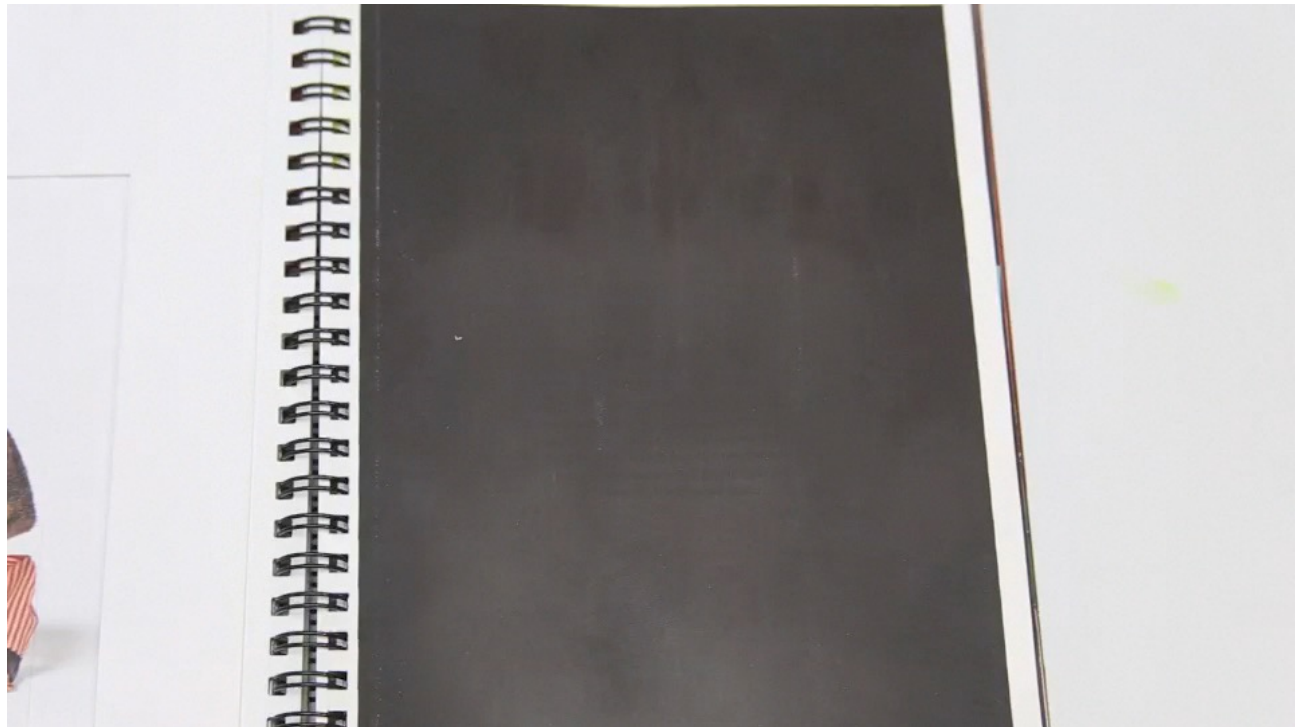
Digital embellishment



Lenticular – 3D, Flip, Motion ...



Thermochromic inks



Interactivity is the key

- Barcodes
- QR codes
- Mobile Action Codes
- Augmented Reality
- NFC
- RFID



monitoring is done from QDIA's secure network operation center with

Smart Packaging

- **Active packaging**
to increase shelf life
 - e.g. anti-microbial, moisture control, light filtering, ...
- **Intelligent packaging**
to communicate
 - Diagnostics and indicators
 - Packaging automation
 - Marketing or consumer information





KONICA MINOLTA

Printed Electronics



Interaction with the consumer with thermochromic ink

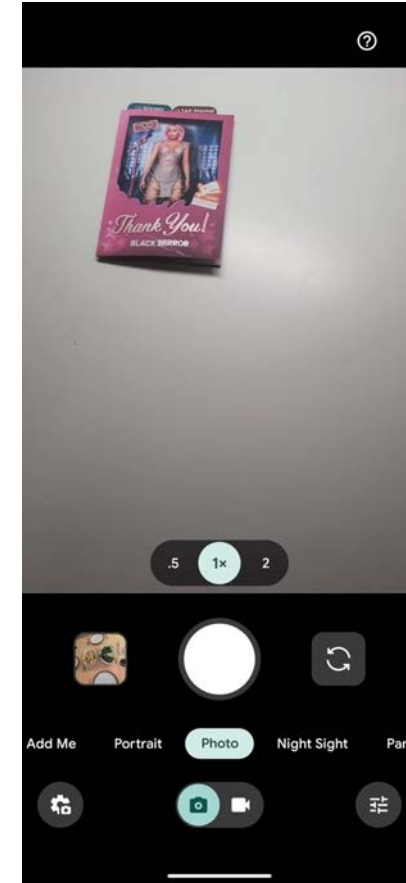
- Critical aspect in all added value
- Penguin Frozen Book
 - The images all disappeared when warmed
 - Special packaging
- Fanta program in Australia
 - Funstigator
- Muse – The 2nd Law
- Design dependent on the sale conditions



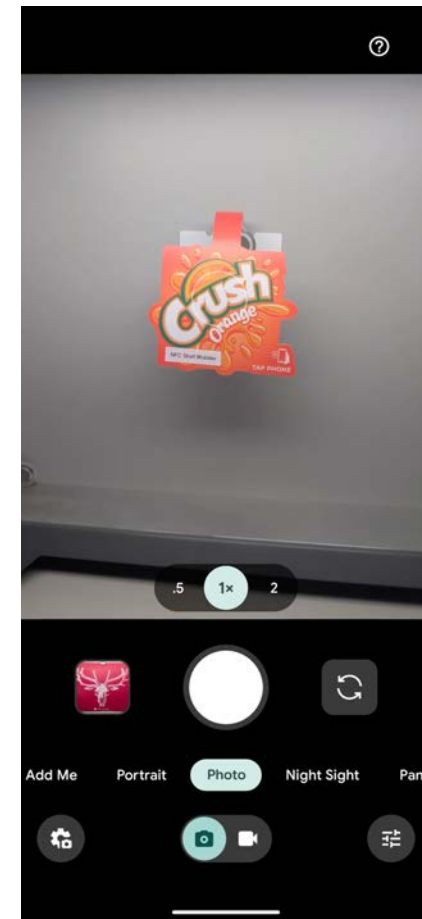
Interactive labels



NFC has come of age



NFC has come of age



A glass sphere filled with small bubbles sits on a floor made of colorful, irregular mosaic tiles. The tiles are arranged in concentric circles and feature a variety of colors including red, orange, yellow, green, and blue. The sphere is transparent, showing the bubbles inside, and its reflection is visible on the tiles below it.

Color is only part of the story!



THANK
YOU



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