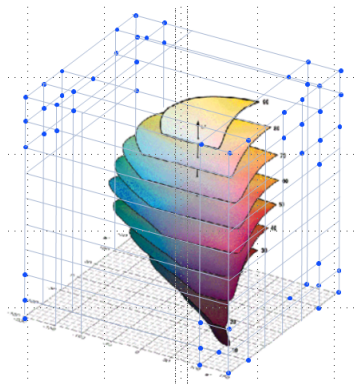


# Faster in color



Prinect User Days

Dr. Stefan Bollmann | PMA, Wiesloch, November 19, 2015



# Overview



- 1 Measuring devices
- 2 Analysis
- 3 Process standards
- 4 Device Links



## 1 Measuring devices

# Automated Measurement Devices



ilSiS 2



- M0-M2 (new: M1)

# Automated Measurement Devices



## ilSiS 2



- M0-M2 (new: M1)
- Standard CMYK Charts, PCM Calibration Charts, HD Multicolor Charts

# Automated Measurement Devices



## i1iSis 2



- M0-M2 (new: M1)
- Standard CMYK Charts, PCM Calibration Charts, HD Multicolor Charts
- Compatible to X-Rite i1Basic Pro 2

# Automated Measurement Devices



## i1iSis 2



- M0-M2 (new: M1)
- Standard CMYK Charts, PCM Calibration Charts, HD Multicolor Charts
- Compatible to X-Rite i1Basic Pro 2
- it8.7/4 about 7 minutes

# Automated Measurement Devices



i1iSis 2



- Good Calibration & Profiling together with i1Basic Pro2





# Automated Measurement Devices

## X-Rite i1iO



- Favorable price, fast in scan mode
- One sensor (i1Pro 2/Konika Minolta FD7) for handheld & automated measurements possible.
- Good result (scan) with patches bigger 6x7,



# Automated Measurement Devices

## X-Rite i1iO



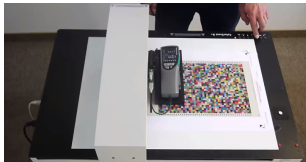
- Favorable price, fast in scan mode
- One sensor (i1Pro 2/Konika Minolta FD7) for handheld & automated measurements possible.
- Good result (scan) with patches bigger 6x7,

Digital and Offset printing: Not a global solution for automated measurements.

# Automated Measurement Devices



## ColorPartner ColorScout A+



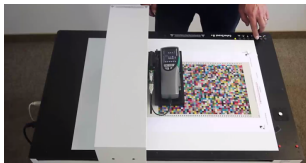
## Print market needs

- 1 Flexible measurement solution

# Automated Measurement Devices



## ColorPartner ColorScout A+



### Print market needs

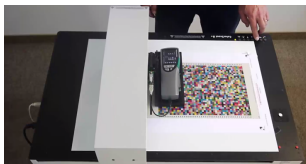
- ① Flexible measurement solution
- ② Precise measurements: One sensor for all measurements
  - ① Spot Color replacement,
  - ② calibration,
  - ③ minispots for process validation and profile correction

it8.7/4 in 1h

# Automated Measurement Devices



## ColorPartner ColorScout A+



- Color Toolbox supports X-Rite eXact & i1Pro 2, Techkon SpectroDens, Konica Minolta FD7 (spot mode)
- For Control Strips & Linearisation Wedges: Only handheld device,
- Profiling test charts better with automated device possible in M0-M3(!) (eXakt, SpectroDens, FD7)



- i1Isis 2: M0-M2 fast
- iliO: fast only in scan mode,
- ColorScout A+ + SpectroDens/eXakt/FD7: reliable, M0-M3, one detector



## 2 Analysis

# Automated measurements into Analysis



Demonstration



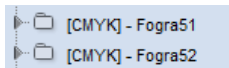
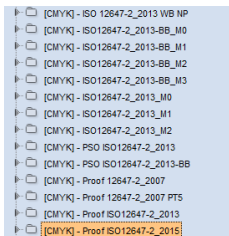


## 3 Process standards



## New standards

- PS1: ISO 2013 (M1-M3) and Fogra51/PSO Coated v3
- PS5: ISO 2013 and Fogra52/PSO Uncoated v3
- ISO 2013 also with black backing





Problem of last year:

- PSD standard: M1/M0 with Fogra39 reference
- Fogra39: no UV brighteners vs. usual paper in Digital Printing
- Much brightening agents



Problem of last year:

- PSD standard: M1/M0 with Fogra39 reference
- Fogra39: no UV brighteners vs. usual paper in Digital Printing
- Much brightening agents

Solved! M1 is now standardized

Beware: Different measurement devices can differ in M1!



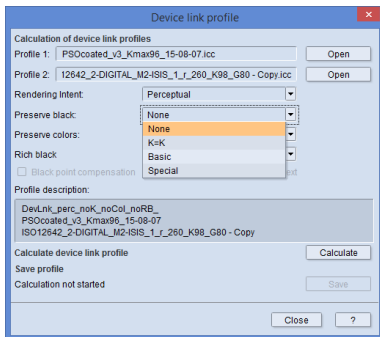
## ④ Device Links

# We need device links for...



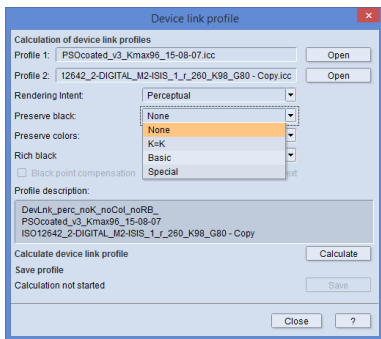
- ① Transform some UCR / GCR into less total dot area output,
- ② Special effects in K,
- ③ Recalculating prints for new process standard.

# Preserve black



- K=K: Black is preserved, CMY transformed
- Basic: Gradation transformation of source black to target gradation
- Special: Black transformed like basic in lights, original black in depths.

# Preserve black



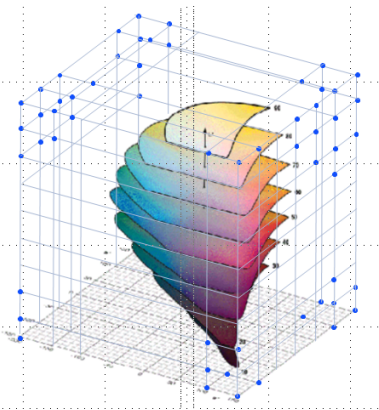
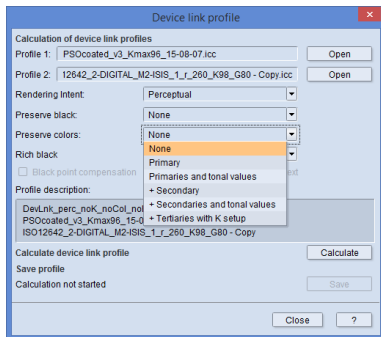
Device Link Fogra39 → Fogra51?

Graphics: Negligible difference in depth black → K=K, special

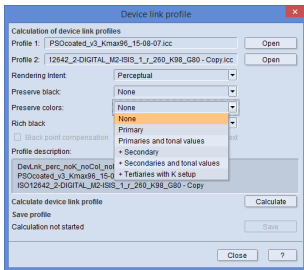
Pictures: New paper blueish, better not preserve black; if yellow dots are problematic → like graphics



# Preserve color



# Preserve color - Old PSO to new PSO?



- Primary colors of Fogra51/51 changed slightly → preserve Primaries (Secondaries)
- Paper changes color values in lights when the same amount of ink is printed
  - Pictures: No tone value preservation
  - Graphics: Tone value preservation might be good: tone gradients

# Device Links - Attention!



- Try the transformation with testjobs in e.g. PDFTools.
- Differentiate Graphics, pictures, etc.
- What is the concern of your customer?

# Overview



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The end



Any questions?