

Challenge in real world color management for textile printing workflows

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“Real world color management”

- The owner of the print shop believes they're the best
- The pre-press operator thinks it is a mess
- The printer operator is scared
- The most common color management system is yellow.....and self adhesive.....



Different applications – different goals

- Digital textile printing can roughly be divided into three segments:
 - Soft signage (flags, signs, decoration)
 - Sportswear
 - Fashion and home decoration
- Each of the segments handle color requirements differently
 - Soft signage → same goals as we know from mainstream printing methods. Corporate identity and accurate color is key
 - Sportswear → similar to soft signage, with often an emphasis on “effect” colors
 - Fashion and home decoration → what the designer approves

Highlighted: Fashion and home deco textile

- The top three problems you might face when walking into an existing workflow:
 - The colors are approved by a designer and often based on taste
 - The printers are often not profiled correctly, creating huge delta E's between design and output
 - Different batches of textiles cause different color perceptions



Reference vs technically correct output



Printed using the
properly profiled
printer



Printed using the
current printer and
workflow

Measuring color vs perception

- Textile is a complex material due to its surface structure and the (often) excessive use of OBA's
- Different production batches use the same material or yarn, but often show slight differences in appearance → causing different perceptions
- Color matching between different textiles always results in a trade off
- Spectral technology, appearance measurements and device link technology are all existing but not available in most workflow software used by textile printing companies → lots of manual labor and matching involved

Challenges

- The most common solution would be to use DeviceLink profiling technology to simulate the (incorrect) reference printer
 - Not many RIP software solutions in this field supports device link
- The printing and measuring process is time consuming:
 - Printing onto paper → sublimating onto fabric → measuring and adjusting → printing onto paper again etc. etc. (although HP is taking big steps here...)
 - Average profile creation process takes 3 hours
- Not many printing companies own proper measurement equipment

Introduction of “real” color management

- 40% of the challenge is psychological
 - “we are great already”
 - “our customers are happy”
 - but.....what they’re really saying is: “we hate change”
- 40% is economical
 - Education and training is lacking, catching up will take time and money
 - Profiling and setting up workflows cause downtime in production
 - Measurement equipment, software tools are expensive in the hands of inexperienced operators
- 20% is technical
 - Difficulties in measuring, calculating and matching colors due to textile properties

Questions?