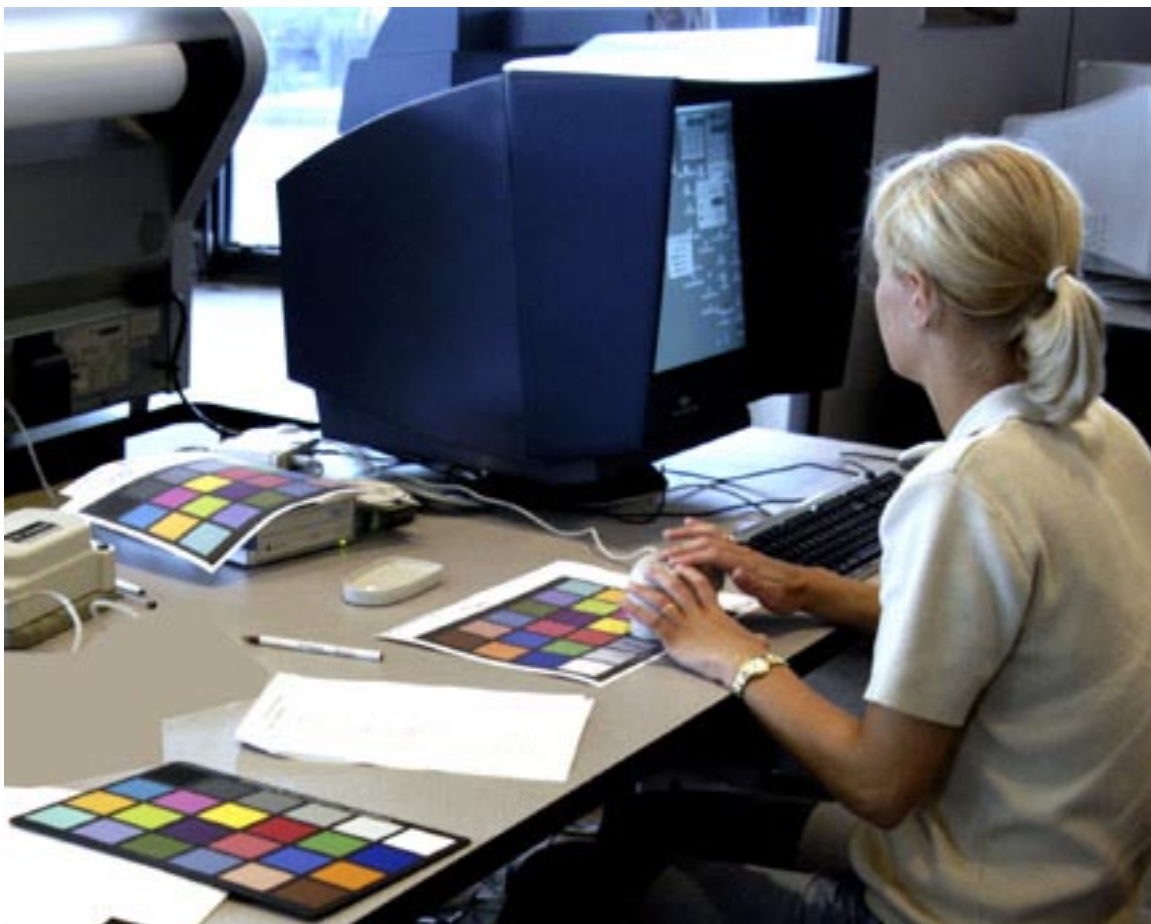




Preview of FLAAR Report Series

On Color Management for Wide Format Inkjet Printing



Color management tools being evaluated at FLAAR facility at Bowling Green State University.

Introduction

This FLAAR Series provides basic introduction to color management if you have a Canon, ColorSpan, Encad, Epson, HP, Mimaki, Mutoh, Roland, or solvent ink printers of all brands.

A training course on color management averages about \$2,000. Thus we feel our series of reports is fairly priced in comparison at \$142 (discounted to \$120 if you have already filled out an Inquiry Form; if not, you can fill out a form now to get your instant \$22 discount).

We recommend training as useful, and for some individuals probably necessary. However our lab manager (Brent Cavanaugh) learned on the job, directly with the printers and color management hardware and software provided by FLAAR. He is the author of one of the reports. But if you do need, or prefer training, do yourself a favor and obtain the FLAAR reports first. Otherwise you will go into the training not knowing the jargon. You may come out of the training bewildered. We made this mistake already. Yes, Dr Hellmuth gets overwhelmed by intense color science too. So he is determined to provide a more gentle form of help that does not traumatize people who wish to use their wide format inkjet prints.

The advantage of the FLAAR reports on color management is that these are not written for color scientists but rather for print shop owners and operators. Furthermore, this series is NOT written for offset printing, flexo, nor any other traditional printing press. Instead these reports are all fresh, dedicated specifically to wide format inkjet printer color management.

The intended audience are owners of all brands of inkjet printers, especially wide format (24" through 72") as well as entry level inkjet of 11 x 17 and 13 x 19 inches. Of course if you have a 16-foot long Vutek, you too can learn from the FLAAR reports.



The BGSU Labs share facilities with the FLAAR evaluation center. So we are in the middle of daily color management workflow. Color patches being printed as a step in custom ICC color profiles. Stephanie works with X-Rite DTP41UV color tools combined with Monaco Profiler ICC color software. We can evaluate this equipment because it is used on a daily basis in our facilities.

Color Management for Wide Format Digital Imaging.

Nicholas Hellmuth has produced a totally comprehensive coverage of every color management and ICC color profile tool and software that he has heard of, seen at a tradeshow, or is available at his two university wide format inkjet evaluation labs.

Printer manufacturers have been known to suddenly change the chemical formula of their ink. Kodak just did that for Encad inks. Media companies routinely change the chemistry of inkjet receptor layers but do not warn the end users. Result is your ICC color profiles are off; your clients blame you for the bad color on their corporate logo.

If you know how to generate your own ICC color profiles you can overcome these hassles inflicted upon you.

This informative report also offers tips on where to find training and additional help on color management relative to scanning and large format inkjet printing.



Contents

- Introduction
- Color Space
- RGB and CMYK Color Spaces
- ICC Color Profiles
 - What is an ICC Color Profile?*
 - Do I Need to use an ICC Color Profile?*
 - Canned ICC Color Profiles Versus Custom ICC Color Profiles*
- Calibrating and Profiling
- Generating ICC Color Profiles
- Explanation of the Process
 - A. Monitor Calibration
 - A.1 After Market Monitor Calibration Tools
 - A.2 On-Board Calibration Monitors
 - B. Linearization
 - C. Target Creation
 - C.1 Software for Creation of ICC Profiles
 - D. Profile Creation
 - D.1 Color Measurement Tools
 - D.2 Comments on Color Management Tools
 - E. Profile Use
 - E.1 Problems Actually Matching Colors
 - E.2 ICC Color Profiles and Copyright
- Fine Tuning Color
- Color Viewing Booths
- Locating Help on Color Management Topics
- Articles on Color Management

- Books on Color Management
- Books on PhotoShop Color Correction
- Resources on the Internet
 - General*
 - Monitor Calibration*
 - General Color Management*
- Color Management Consulting
- Color Management Training Programs
- FLAAR Reports
- Feedback
- Advisory
- Acknowledgements



Step-by-Step Guide to Color Management, by Stephanie Madeya, FLAAR at BGSU; edited by Nicholas Hellmuth. New August 2003.

To prepare for this report Nicholas spent the entire summer reading all the books available on color management. Even the excellent new book "Real World Color Management." But it turns out they are all written by color scientists or people with 40 years experience in offset printing.

So Nicholas felt that what would be more useful to our readers would be

- A fresh new approach.
- No more offset printing.. lets make it all dedicated to inkjet printers
- Lets have it understandable; no PhD required in color science
- Focus the reports on Epson, HP, Encad, Roland, Mimaki, Mutoh, etc.

With this guideline, Stephanie Madeya did the writing and organization. The notable advantage is that she writes in a manner that is understandable to a print shop owner, to a printer operator, and to the thousands of people who are buying wide format printers with no prior experience in ICC color profiles.



Contents

Introduction – Assignment Purpose and Description

Methods to Color Management Madness

What does color management do?

Why do I need to use color management?

Does color management really work?

Process Preparation

Color Management Devices

Initial Process Expectations

Step-By-Step Color Management Process Breakdown

Color Management Process Step 1 - Monitor Calibration and Profiling

Pre-Calibration Expectations

Completing the Calibration and Profiling Process

Color Management Process Step 2

- Printer Linearization

Color Management Process Step 3

- Patch Creation Process

Color Management Process Step 4

- Profile Development

Color Management Process Step 5

- Profile Implementation

Color Management Process Step 6

- Profile Evaluation

Color Management Process Step 7

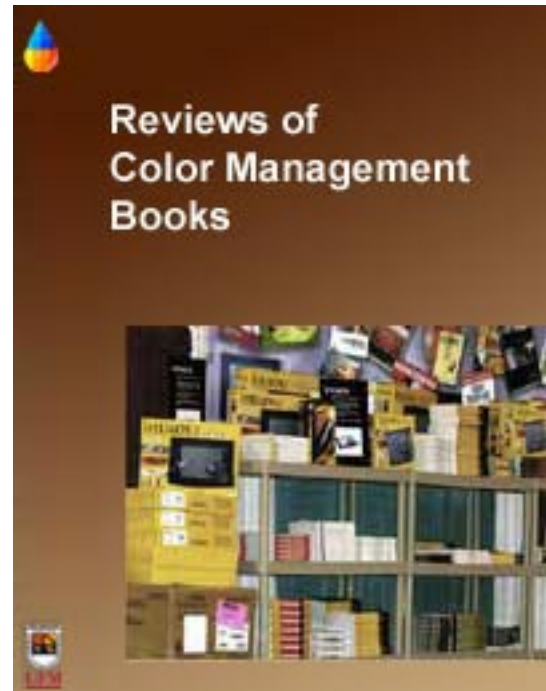
- Profile Tweaking

Final Process Thoughts and Reactions

Tips and Suggestions for Creating Output Profiles

Book Reviews of Publications on Color Management,
new June 2003

List of the standard references and most important books on color management. Most titles have annotations and review by Nicholas Hellmuth. Also contains annotated description of sources on the Internet.



Review of the GretagMacbeth EyeOne Pro,
Brent Cavanaugh, lab manager, Bowling Green State University.

Brent has many years experience in a digital portrait studio lab before taking over the wide format printer lab at BGSU. This is the facility shared with FLAAR. He is now in charge of running two ColorSpans, two Epsoms, two Mimaki, five HP DesignJets, Iris giclée printer, Cruse scanner camera and other equipment. So if you need to know about color management tools for your wide format printer workflow, here is a good start.



Glossary of terms on Color Management for wide format printers, digital cameras, and scanners, new August 2003.

Remove the mystery of color management by learning the jargon. You too can understand the arcane terms. Dr Hellmuth's PhD is definitely not in color science, so he too had to struggle to teach himself all this. What took him years of reading and attending conferences he carefully distills down into this succinct glossary that you can read in two hours or less. So you get all the benefits of his research packed into a handy PDF download.



18% gray
absolute colorimetric rendering
absolute color reference systems
additive color model
Adobe Gamma
Adobe RGB (1988),
algorithm
banding
banding (on inkjet print)
base linearization
black
black point
black point adjustment
black point compensation
blooming
brighteners
brightness
bronzing
calibration
canned profile
capture
characterization
chroma
chromaticity
CIE
CIE Lab
CMYK

color
color adaptation
color balance
color by the numbers
color cast
color circle
color control strip
color designation system
colorimeter
colorimetric rendering
color management
color model
color spaces
color reference systems
ColorSync
color temperature
color viewing booth
colorways
color wheel
contrast
correction
CMM
custom profile
Delta E
densitometer
density
device
device dependent

device independent
diffuse highlight
differential gloss
dynamic range
embedded profile
Gray Component Replacement
gamut
gamut mapping
generic profiles
gloss
grain
gray
gray card, see Kodak gray card.
gray levels
grayscale
hard proofing
highlight, highlight area
HSB
HSL
hue
ICC
ICC color profile
ICM, Windows PC version of ICC.
illuminant
input
input device

Intent, meaning color rendering
IT8 target
Kodak gray card
light
lightness
linearization
luminance
luminosity
luster
LUT, Lookup Table (Green pp. 146ff)
Macbeth ColorChecker
matte finish
metamerism
Munsell (color) system
named color
neutral
output See also input.
output device
Pantone
PCS
percent
perceptual
Photoshop
primary colors
profiles
profiling
process colors

proof
Relative Colorimetric
re-linearization
rendering intent
Ridgway color system
RGB
satin finish
saturation
saturation rendering intent
screen capture
screen grab
secondary colors
setting white point
soft proofing
spectral data
spectrophotometer
specular highlight

spot colors
sRGB
step wedge
subtractive
swatch book
tag
tagged
tint
tonal gradation
transform
transmissive reading
tristimulus data
UCR
UV filter
verbal color designation
viewing booth
Web safe colors
white

white point
white point adjustment
workflow
working space
YCC color space
yellow, one of the subtractive primaries.



Color Management with Monaco Profiler, the pro edition. One report by Brent Cavanaugh, the other by BGSU professor Chuck Spontelli.

Chuck's MS degree is from Rochester Institute of Technology. He teaches printing in the visual communications program, College of Technology, BGSU. So it helps to have the direct documentation from an experienced user of whether a particular software package works, or does not (especially when the software costs several thousand dollars).

We intend to continue preparing material on color management. The reports shown in this Preview are the results of our labors this year, based on six years experience primarily with Encad, HP, ColorSpan, and Epson. Dr Hellmuth has visited print shops with Roland and Mutoh. FLAAR has two Mimaki and an Iris giclée printer too.



We gathered all the FLAAR discussions of color management together into a single SERIES. Previously color management reports had been scattered in the Survival Series, RIP Series, and Bonus Series. Now they form their own Color Management Series.

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