Betterlight
Conference
2006
Which Color Space is Best?

Gamma, 1.8 or 2.2?
What is Color Management

- Identifying the color characteristics of a device
- Communicating that information to the next device.
What does that mean?

- Very particular how dark my toast is, so I test my new toaster.

- I toast 6 slices of bread, one at each setting on the dial.

- Decide that # 4 is the best for me.
What it is

- I go to my neighbor's house and repeat the test on his toaster.

- His toaster requires a setting of 6 to achieve my perfect toast.

- That's what color management is... finding what settings on different devices achieve similar results.
Toasters

4

camera

Toast Connection Space

Profile Connection Space

LAB

6

monitor

Toast Connection Space

Profile Connection Space

LAB

7

Printer
Which RGB Space is Best?

- The answer is …
- That depends…
- On who, where, and how your file is to be used.
Pro Photo or any wide Gamut

- Good to use if you are printing the files yourself.
- DO NOT SEND THESE FILES OUT!!
- DANGER, DANGER
- If not processed correctly your printer can easily hose your file. You will be responsible.

Great for archiving the maximum color of your files (IN YOUR ARCHIVE)

(see sample)
Adobe RGB

- Good choice for Conversion to CMYK.
- Works well for InkJet output.
- This is the default color space in PhotoShop when color settings are set to North American Pre-Press.
sRGB

- If your output is for Photographic devices where no printer profile is provided, this is the best choice.
- This is also the best choice for web images.
- It’s a 2.2 ...... sRGB world
Choosing a Space

- Give the client what they are expecting.
- Wide Gamut spaces for your use only.
- If you don’t know what they require, call and ask.
- If they can’t answer your question, send sRGB
- It’s a 2.2 ….. sRgB world
Converting

- Large space to smaller space, when needed OK
- Small space to larger not necessary, you gain nothing
- Crayons
Two types of Gamma

- Monitor Gamma
- Gamma of your file
- They are separate but work together
Monitor Gamma

- 1.8 - Older Mac Standard
- 2.2 - Windows Standard
- Higher values = more midtone contrast (darker appearance)
- I profile monitors at 2.2
- Jump to PM5
Monitor Gamma

- Monitor gamma does not change your file
- It changes the way your file is displayed
Gamma Correction

- On a correctly Profiled monitor, PhotoShop can compensate and your file 1.8 or 2.2 will be displayed correctly.

- Jump to Photoshop
Why use 2.2 Monitor Gamma?

- 2.2 files with 2.2 monitor gamma are less likely to show banding because of the conversion.
- I find it difficult to obtain good black level at 1.8 on many monitors.
- Most monitors have native gamma of 2.2, if you change it, the video card has to work harder.
Gamma Correction

- Adobe RGB 2.2 gamma used with 2.2 monitor gamma no correction needed.
- Adobe RGB 2.2 used with 1.8 monitor gamma correction needed and may not work as well.
File Gamma

- 1.8 (Colormatch RGB and Apple RGB)
- 2.2 (sRGB and Adobe RGB 1998)
PhotoShop Gamma Path

File Gamma → Monitor Gamma → Display
Recap

- Toaster Color Management
- Which RGB?
- Gamma 2.2 or 1.8
- It’s a 2.2 …… sRgb world
Questions?
Thank You