

W1.1 2005 - 022

Color Rendition Teleconference, August 17, 2005

Present: Susan, Franz, Dmitri, Bill, Ann, Helen, and Eric

Agenda:

- 1) The Color Fidelity Experiment - next steps

Discussion:

1) The discussion centered on image preparation for the Color Fidelity experiment. Since the July teleconference, Óscar completed the task of extracting 64-color palettes for each image and has posted them to the ftp site. He supplied two palettes for each image; one labeled "Octree" and one termed "Median". Questions arose regarding the differences between these two approaches as well as clarification as to whether these are Photoshop routines or something else. Óscar was not in attendance, so these questions will be posed via email. We discussed which of the techniques provided a more appropriate patch set for each of the images, concluding the Octree approach resulted in a better set of patches for the Picnic and Paintgirl scenes while the Median approach provided clearly superior patch set. The Median set was too dark for Paintgirl and too blue for Picnic while the Octree set for Cashew Nuts had so many vibrant green patches that essentially defied the imagination that it was related to the scene at all. There was not a clear favorite for the Bridge and Groom image. The Octree set contains an unneeded red and a pair of rather wild pinks and few pastels, but provides a better representation of skin tones than the Median set. Bill suggested that it might be useful to crop the image, possibly using the Lasso tool in Photoshop, to limit remove the regions of lesser interest prior to conducting the patch extraction routines. Helen suggested it would be useful to know how the routines functioned so that we could make adjustments to produce more reasonable results. Again, questions will be posed to Óscar via email.

Helen also suggested that we should look at the manipulations being executed by Ann's Actions set. She believes that some of them go too far; the blueHueRotate(± 40), for example. Everyone should take a look at these prior to the next meeting. (Helen resent the Actions file and instructions for doing so.)

Susan reported that she started working with the initial images to see what will be involved in creating the rulers for the experiment. The machine that was suggested as being the current best choice for creating ruler prints similar in quality to those that comprise the ISO 20462 rulers is a digital mini-lab. She worked with Karin Töpfer to print the original rendition of each of the scenes using the printer profile supplied for the machine. The Bride and Groom, Cashew Nuts, (both using Perceptual intent) and Paintgirl (relative colorimetric intent) look reasonable. The Paintgirl using Perceptual intent looks a bit too yellow. The Picnic scene, which is an sRGB image, looks too magenta, at least in the sky region. Ann suggested converting the Bride image to sRGB to see if it turns magenta.

Dmitri attempted to evaluate each of the original images relative to the Euroscale standard, looking for out-of-gamut colors. However, the Nikon RGB profile was needed for the Paintgirl image.

Susan posed the question of whether we should check the variability of the preferred color rendition for each of our images, following the spirit of the experimentation conducted by Fernandez et al as reported in “Analysis of Observer and Cultural Variability while Generating “Preferred” Color Reproductions of Pictorial Images” JIST (49) 96-104 (2005). The point of determining the level of variation is that it may be fundamentally more difficult to establish a standard with images, for which the preferred color rendition varies widely. It may be worth noting here that the image that had the lowest inter-observer variability and the image that had the highest inter-observer variability in the Fernandez experiment were the same images that had the lowest and highest inter-observer variability, respectively.

Reminder from previous meeting:

Bill requested that either the TC2.83RGB or TC9.18RGB files in the Gretag/MacBeth profile maker printer reference folder be printed on the proposed printer for to provide characterization data. A uniform gray image might be helpful as well. Susan will look into this.

Actions:

- Susan to send a note to Oscar regarding the questions on the scene palettes
- All to conduct the manipulations to evaluate whether some of them go too far

Next Meeting:

- OCT 3, 2005 **10:00 EDT**