

## **W1.1 Image Quality of Printers**

**W1.1 2003 – 040**

Color Rendition

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### **Color Rendition Ad Hoc Group Teleconference Notes 6/25/03**

**Present:** Bob Cookingham, Sue Farnand, and Karin Töpfer

**Next teleconference:** July 23 at Noon EDT

#### **Discussion 6/25/03:**

##### General Issues:

1. We agreed to submit an abstract for the Electronic Imaging Science and Technology Conference standards session. Bob will revise the PICS abstract and submit it.
2. We also agreed to cancel the July 9 teleconference to give people more time to work on the quantized serpentine targets.

##### Color Quantization Discussion:

The primary topic of discussion on color quantization was the serpentine test targets Sue made with the quantized steps. We reviewed the inkjet targets and electrophotographic targets, from Ann, and the photographic targets. Some very interesting observations and ideas surfaced.

1. From the quantized targets it one can see contours that are about 1 L\* unit in magnitude. Depending on the technology, this can occur for different levels of quantization and appears to also depend on the lightness level as expected.
2. The idea of a way to quantify the effect of this in terms of images is to introduce clipping into images in the same level as occurs in the serpentine targets. This would allow us to visually inspect both the targets and the images with increasing levels of quantization and to also make quantitative measurements on the serpentine target steps.

Karin will share the data and plots with the team. It will probably come as a zip folder so it can penetrate the firewalls.

## Color Fidelity Discussion:

Silver halide prints have been completed of the color test images and these will be sent to the groups to share amongst themselves. Next teleconference on July 23 we can discuss how we might begin to do a preliminary evaluation of these prints.

Comments via email from Óscar on printed color fidelity images and comments in red from discussion at 6/23 teleconference:

1. All the images have "Tiff RGB" as embedded color profile. This for me means that they don't have a standard embedded color profile. Should the chosen images have a standard color profile embedded (such as sRGB)? Anyway Photoshop or any other imaging program will have to interpret the RGB data, so it would be better if we agree on it ahead of time.
2. The Oceanpalm image is bigger than A4 (A-size). Then, only B (or bigger) printers can print it. Do we want this to happen?

Suggestion is to resize to a standard size of 5" x 7" or 125mm x 175mm.

3. We look at the images contents, there are:
  - 2 landscapes images
  - 2 interior images
  - 4 skin tones images
4. We could discuss for hours about the right contents and the "use rights" of the images... So I would talk only about these images. My main concern is the limitation of dynamic range of some of them. For instance:
  - Shadow details in "Austria" image
  - Highlight details in "Pillowchair" image
5. I have them printed in 2 printers and 2 medias (High Gloss Photo and Heavyweight). Before making copies for all of you, I would like to be sure that you agree on keep using these images for now. I look forward to the minutes.

These are not the final images we will be doing or evaluations on. This is a immediately available set of image Ann had available for us to get started on that were public domain. Dave McDowell is sending me a reference of a standard set that the CIE is working on that might be a good set to consider for our final set. Whatever set we chose for our final evaluation will be well in the future.