

Meeting notes from informal Workshop on Consistent Colour Appearance

Rochester Institute of Technology, 1st June 2017

Participants: Craig Revie, Elena Fedorovskaya, Greg High, Ken Elsman, Mark Fairchild, Nikolas Pfeiffer, Birgit Plautz, Akihiro Ito, Max Derhak.

Remote: Yasuki Yamauchi, Don Hutchison, Roman Byshko, Dimitris Mylonas, Jordan Kaisen

Recording timings:

00:02:00 Introductions, CIE Technical Committee TC8-16 overview (Craig Revie)
00:15:30 Research plan for Yamagata University (Yasuki Yamauchi)
00:38:05 Research plan for NTNU (Greg High)
01:08:30 Research plan for Fogra (Roman Byshko)
01:18:00 Colour naming experiment (Dimitris Mylonas)
01:39:00 Research plan for RIT (Elena Fedorovskaya)
02:15:00 Conceptual visual assessment experiment (Craig Revie)
02:39:00 Prior work done by CGATS (Ken Elsman)
03:14:00 Discussion

Meeting notes

Yamauchi-san's presentation compares the trend lines with CIECAM02 and it would be interesting to make a similar comparison with CAM16.

Difficulties for display: ensure bright enough white point and that black point is suitably adjusted.

Nikolas Pfeiffer made a proposal that each member of the TC should be invited to make their best guess as to what is needed to achieve CCA and document that. The intent is just to make a guess and this would serve as a base from which we can move forward.

Colour name boundaries seems to be related to language rather than the person or at least the language that the observer identifies with. Perhaps the naming boundaries to be used for CCA needs to be a combination of all languages.

One model presented by Elena is a kind of proofing model. This model builds on the observation that the ISO 15339 CRPCs produce a consistent colour appearance. This observation can be combined with a proofing model to ensure that consistent colour appearance can be achieved on any printing system. In this model, the following steps are used:

- (a) One of the CRPCs is used as the reference and images are rendered (to CMYK) for this CRPC,
- (b) the CRPC with the colour gamut that is closest to that of the printing system to be used is identified,
- (c) the same CMYK values that were used for the reference are used for this CRPC and a 'proof' of this image is made on the target printing system.

This method is unlikely to be optimal for the printing system to be used but the idea is interesting and could provide some kind of baseline.

We will need a good algorithm to identify important colours in an image. Mark Fairchild said that Susan Farnand has done some work in this area and could provide useful input.