

## Common Colour Appearance

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[www.fogra.org](http://www.fogra.org)

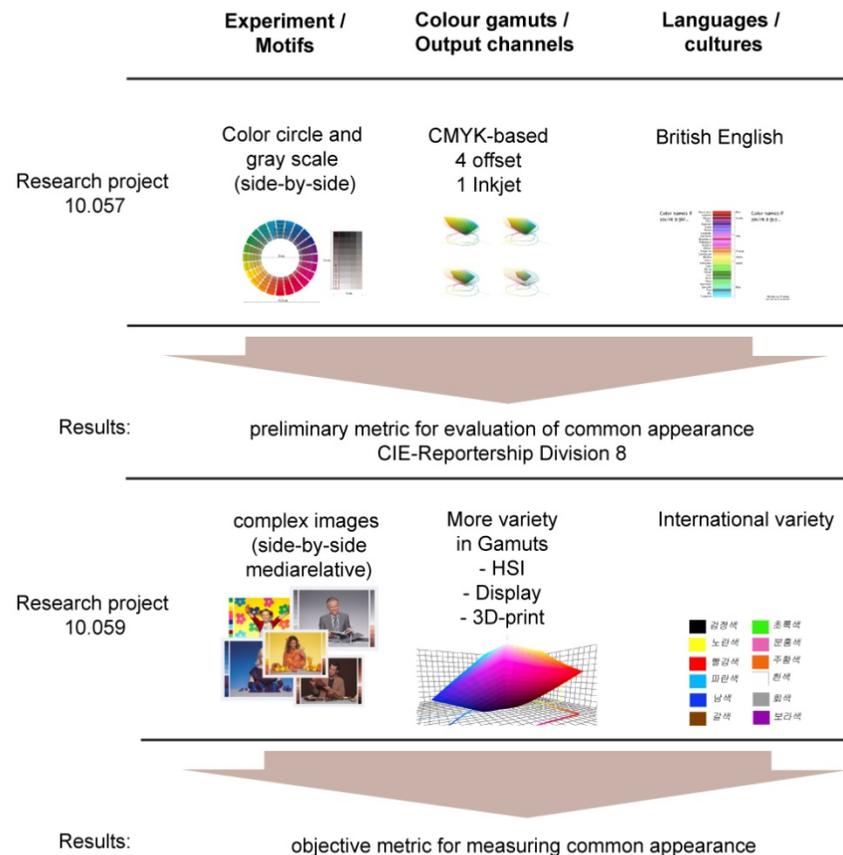
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1. Fogra research proposal Common colour appearance
2. Concept of the psychophysical experiment
  1. Selection of test images
  2. Selection of output gamuts
3. Outlook

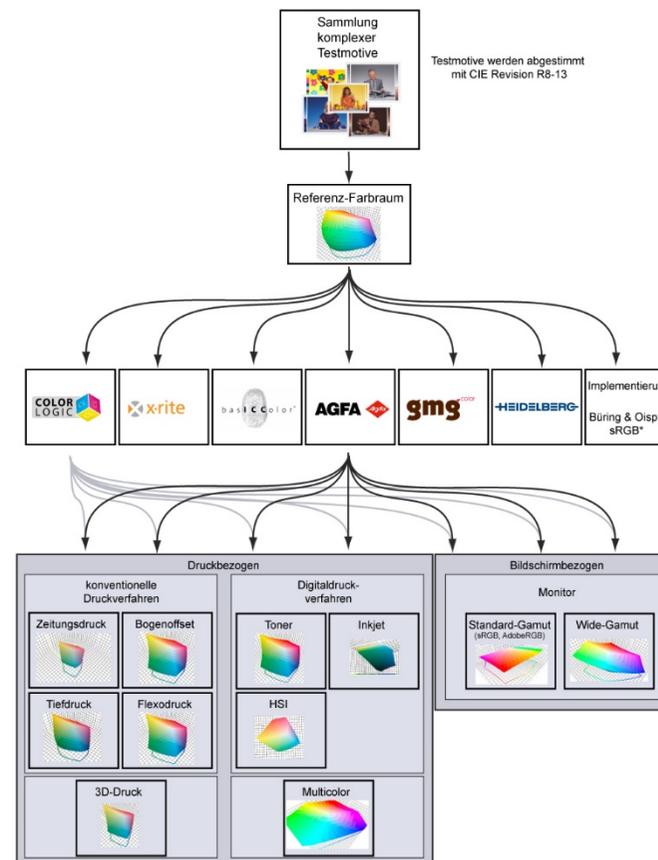
# 1. Fogra research proposal 10.059

## Common appearance – Evaluation of an objective metric for measuring common appearance



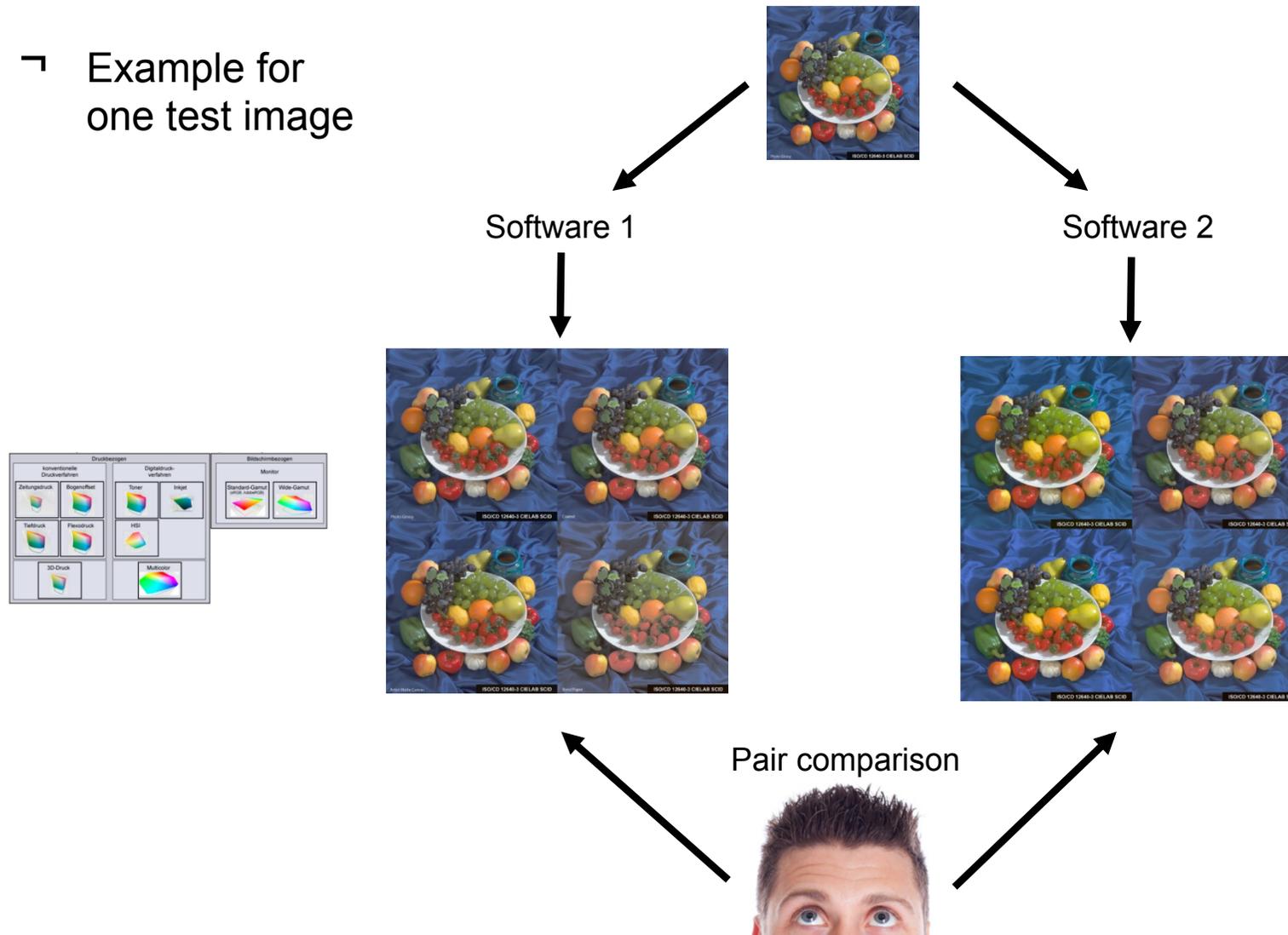
Aim of experiment: Statistical proof, that there is a Common Colour Appearance

- Selection of test images
- Storage in reference color space
- Perceptual gamut mapping through several software packages
- Selection of relevant output-gamuts



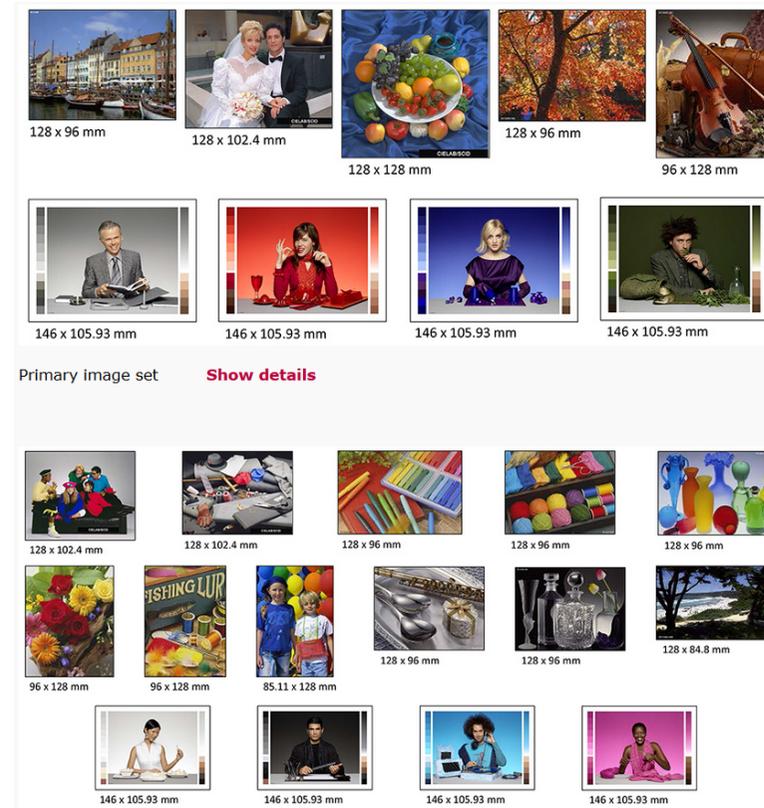
## 2. Concept of Psychophysical Experiment

Example for one test image



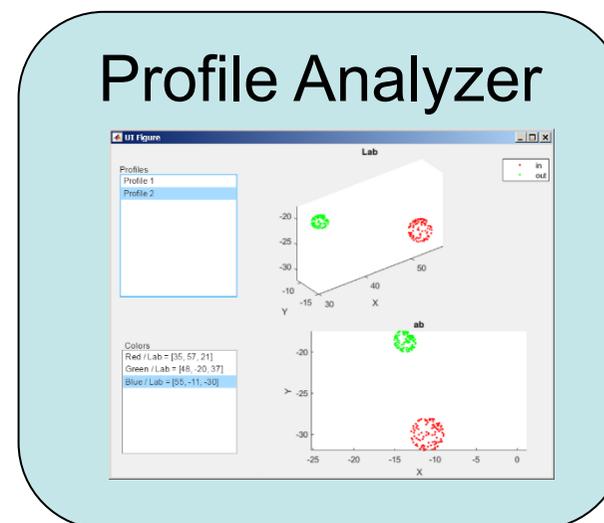
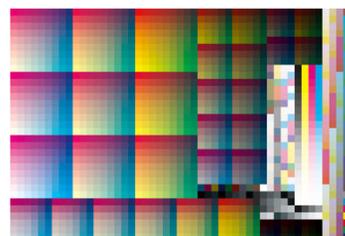
## 2.1 Selection of test images

- Selection of images on [http://www.color.org/resources/r8-13/CCA\\_test.xalter](http://www.color.org/resources/r8-13/CCA_test.xalter)
- Further reduction of number of test images used in experiment needed



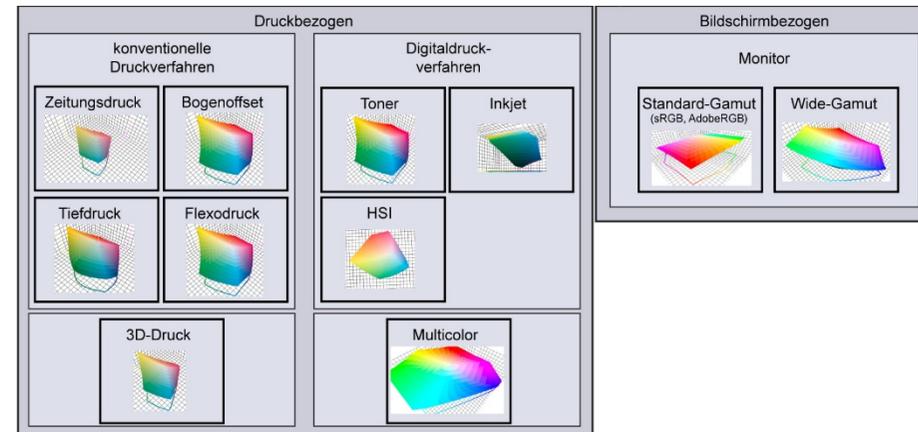
## 2.1 Selection of test images: Analysis of the strategies

- For complex images, the differences between images in one set need to be maximized
  - ⇒ fundamentally different gamuts in shape and size
  - ⇒ using images where the differences between each perc. mapping strategy is largest
- Analysis:
  - How different are the perceptual strategies in different areas of the color space?
  - May this help to select images where the differences of the strategies are most stressed?



Limitation to:

- ↷ HSI-Gamut
- ↷ Multicolor
- ↷ Large gamut display (BenQ)
- ↷ FOGRA51
- ↷ FOGRA52
- ↷ FOGRA53



### 3. Outlook

- ↪ Selection of test images
- ↪ Conducting pilot experiment
- ↪ Finetuning of exp. Setup (questions to ask and way of stimulus presentation) with Prof. Gegenfurtner
- ↪ Connect the results of the psychophysical experiment with the language database of Dimitris Mylonas

