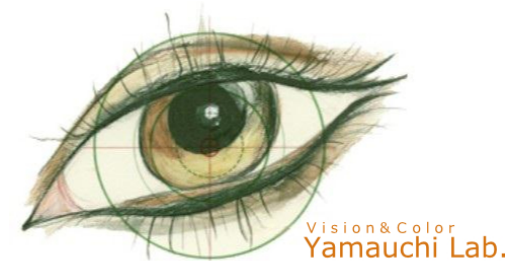


# Activity Report

~Trend-line approach to predict CCA~



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# Purpose & Hypothesis

- Purpose: Propose an evaluation method (metric) to describe how the degree of consistent color appearance can predict for different mapping algorithms for different gamuts.
- Hypothesis: Euclidian distance between the mapped color and trend line for that specific reference color can be used to predict CCA.

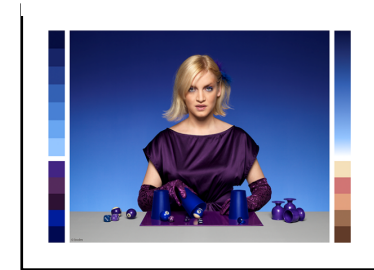
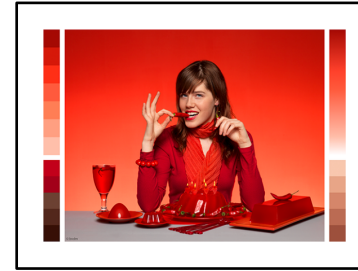
## Summary of the activity

- Experiment: Psychophysical evaluation experiment (Paired comparison) for several images completed.
- Euclidian distances between the trendline of the reference color (RGB of adobeRGB) and mapped color were calculated.

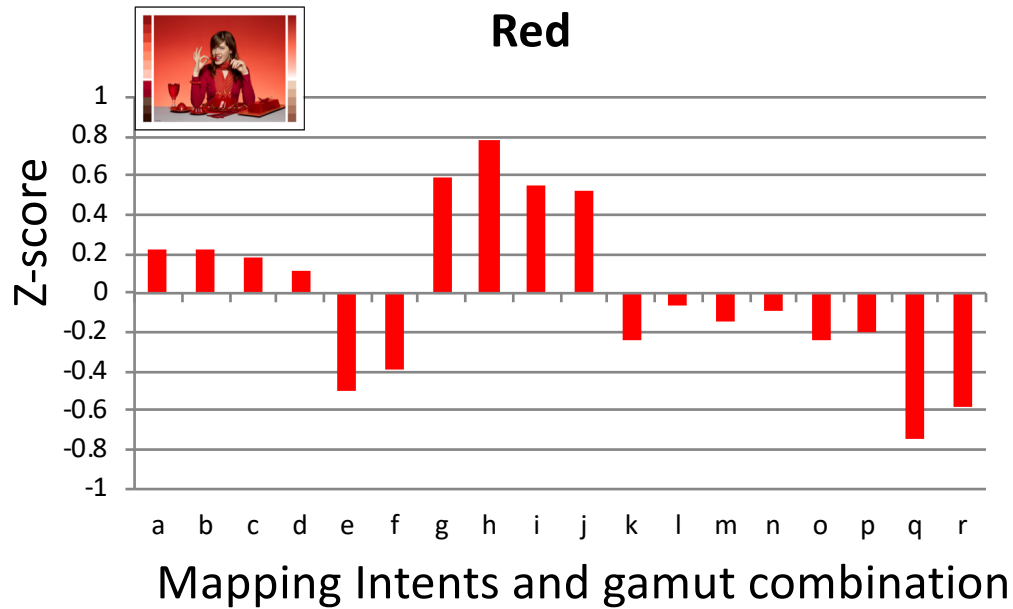
# Experiment:



Paired comparison



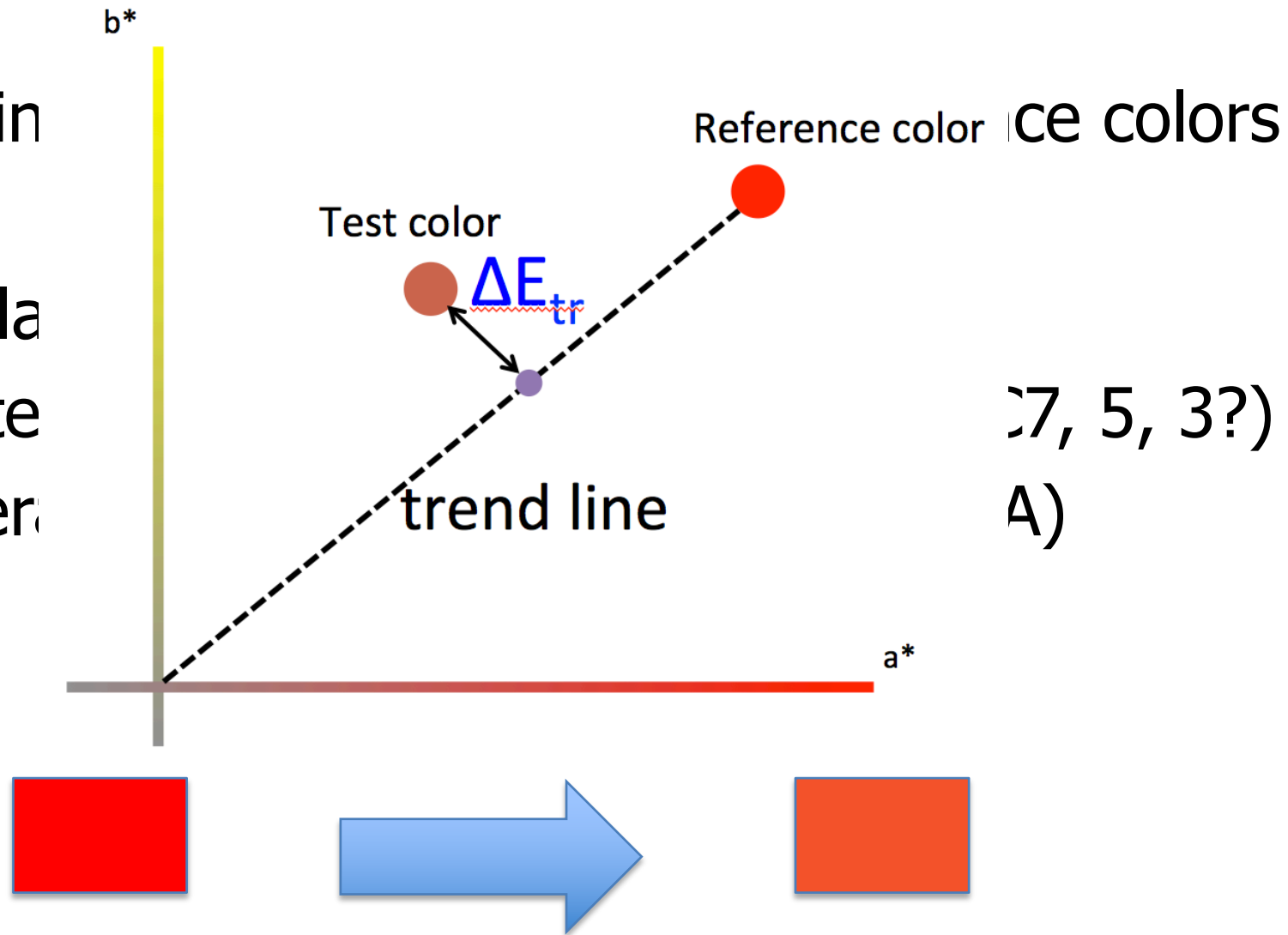
Stimuli



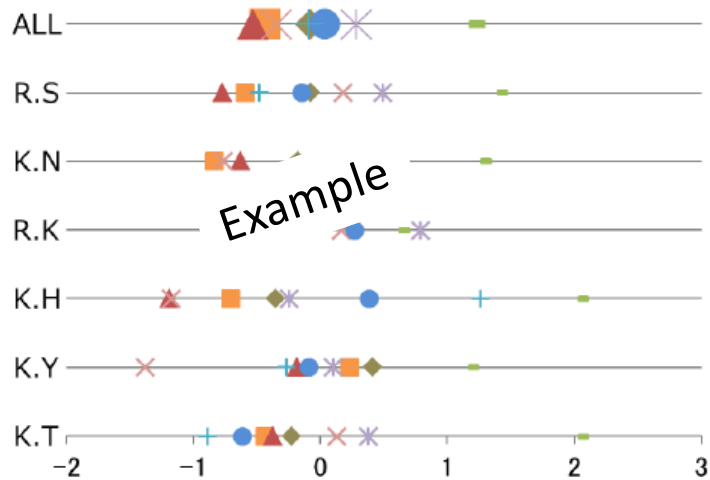
- In the experiment, CRPCs were adopted for gamuts.
- Some combinations have better CCA (= higher Z-score).

# Stimuli

- Origin
- 
- Displa
- Printe
- Severa

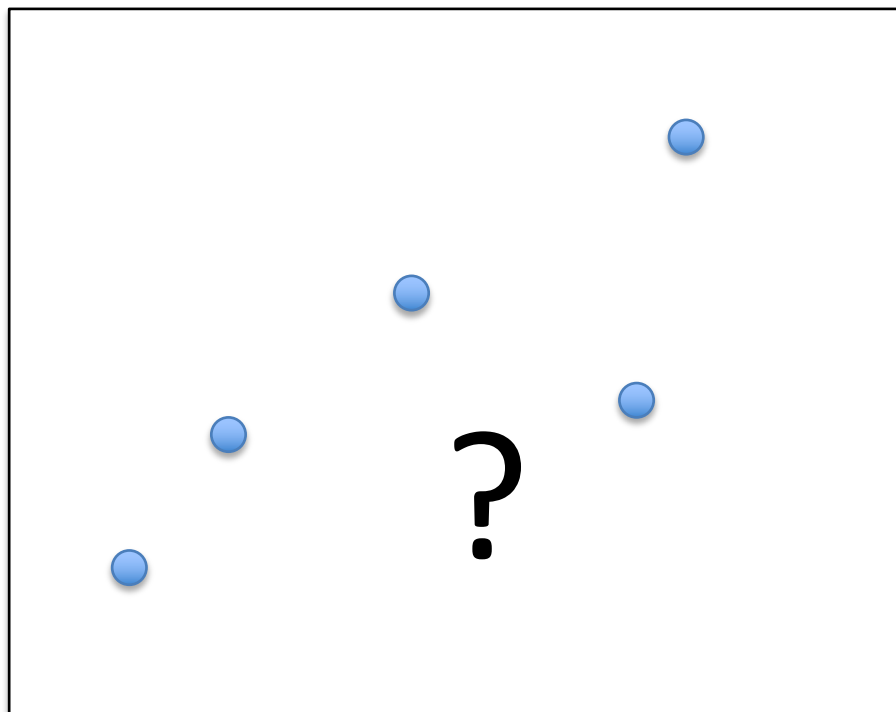


# Analysis



calculating Z-score

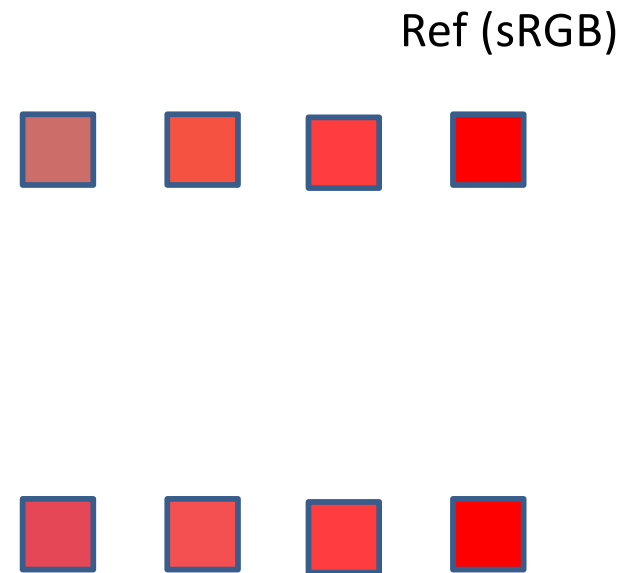
Score

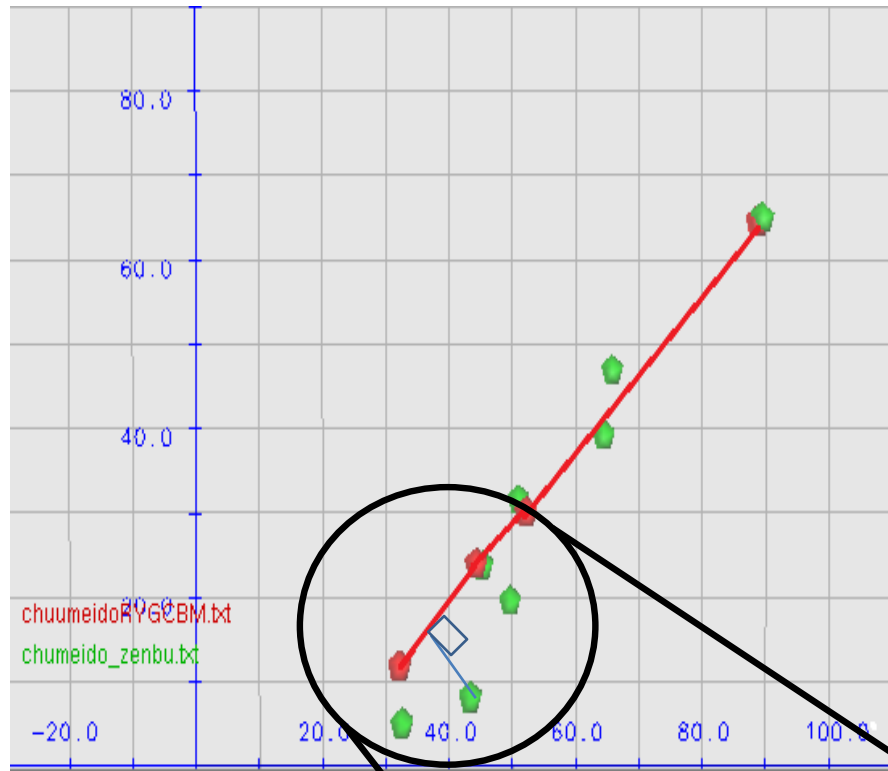


$\Delta E_{tr}$



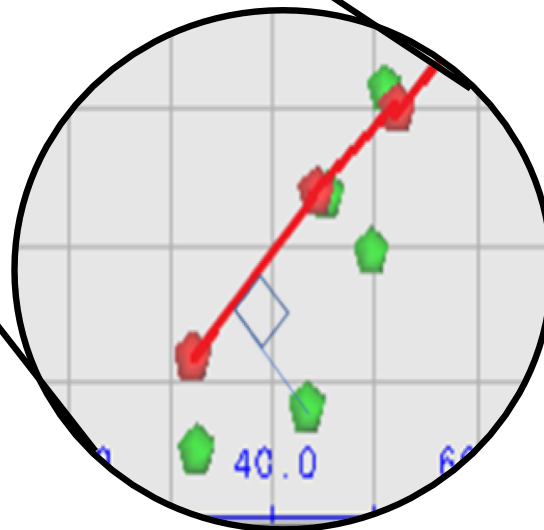
Same mapping





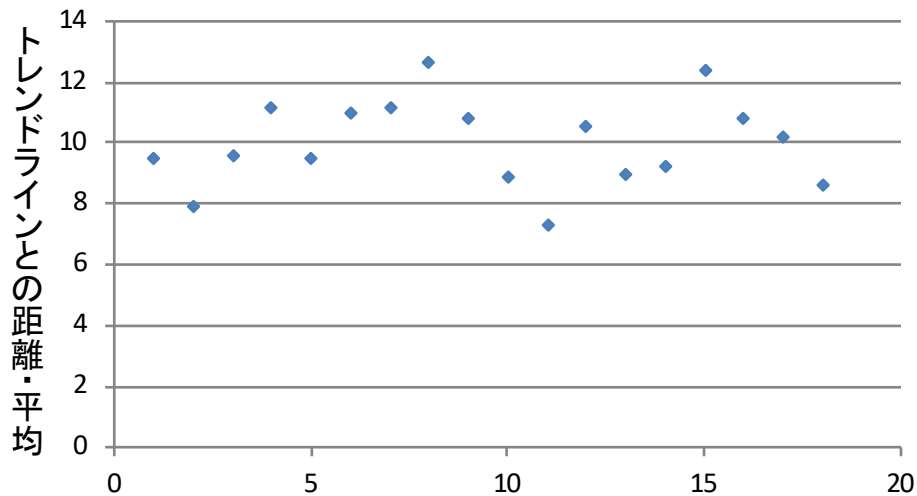
## 例) 赤のトレンドライン

中村さんの8点(緑点)とトレンドライン(赤線)の距離を求める



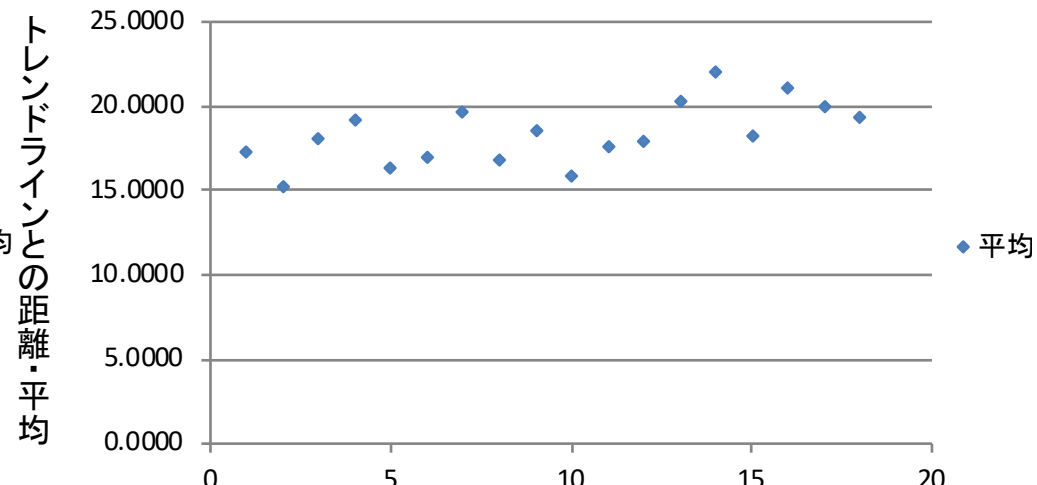
# 中明度

## Red Image



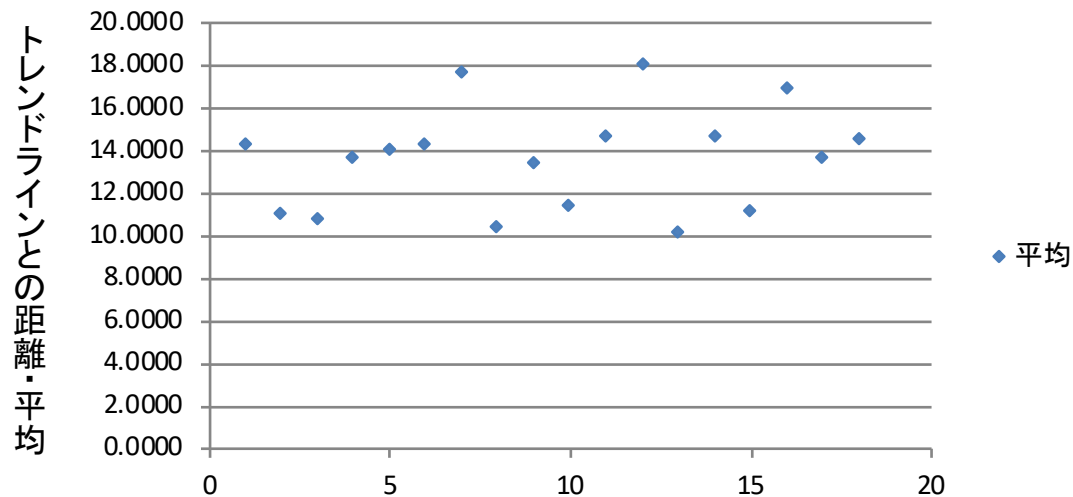
Order of the evaluation

## Green Image



Order of the evaluation

## Blue Image



Order of the evaluation



# Trendline verification

Trendline revisited

current trendline based on CRPC-x,  
General shape (Sphere....)

Evaluation Experiments

in conjunction with the experiments of other sites