

# Research Plan

~ Is trend-line applicable to predict CCA? ~



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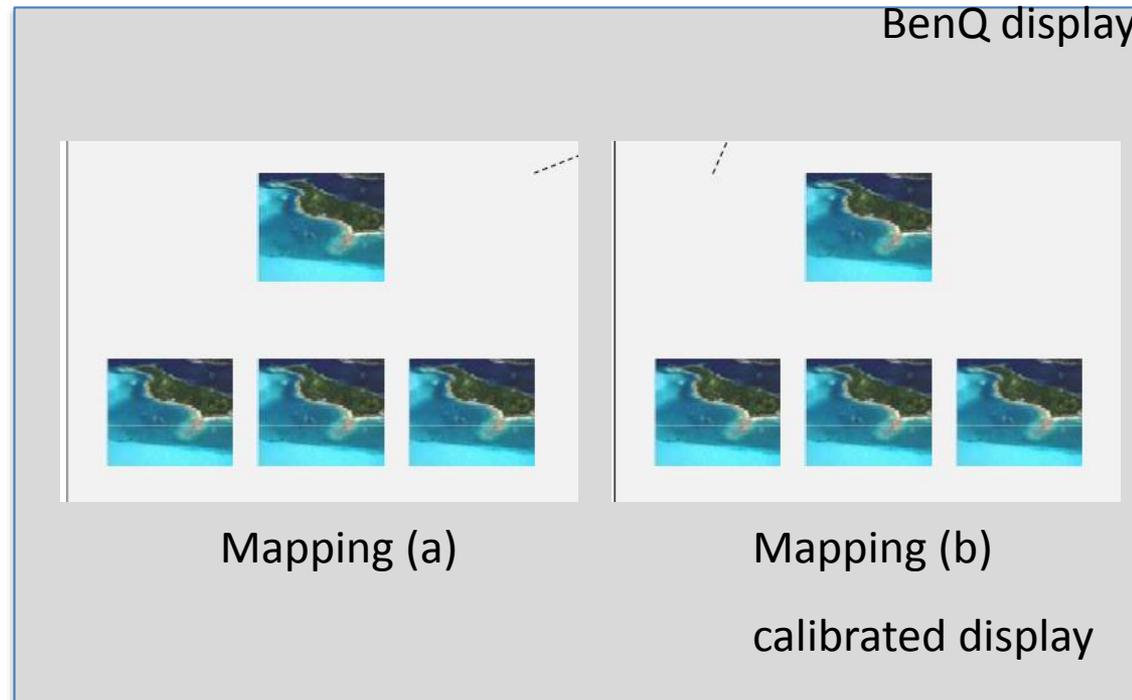
# Purpose

We would like to evaluate the degree of consistent color appearance through a paired comparison method (z-score) of two different mapping algorithms.

We would also calculate the color difference of the reference colors converted using the same GMA and gamut from the trend-lines we obtained previously.

We would check the correlation between two results. If we can get good correlations, then we may use the color difference from the trend-line as a metric to describe CCA.

# Method: A paired comparison evaluation



Which pair of two sets has consistent appearance?



128 x 96 mm



128 x 102.4 mm



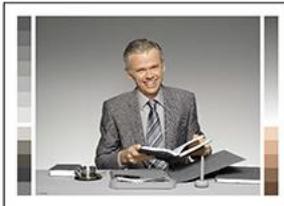
128 x 128 mm



128 x 96 mm



96 x 128 mm



146 x 105.93 mm



146 x 105.93 mm



146 x 105.93 mm



146 x 105.93 mm



128 x 102.4 mm



128 x 102.4 mm



128 x 96 mm



128 x 96 mm



128 x 96 mm



96 x 128 mm



96 x 128 mm



85.11 x 128 mm



128 x 96 mm



128 x 96 mm



128 x 84.8 mm



146 x 105.93 mm



146 x 105.93 mm



146 x 105.93 mm



146 x 105.93 mm

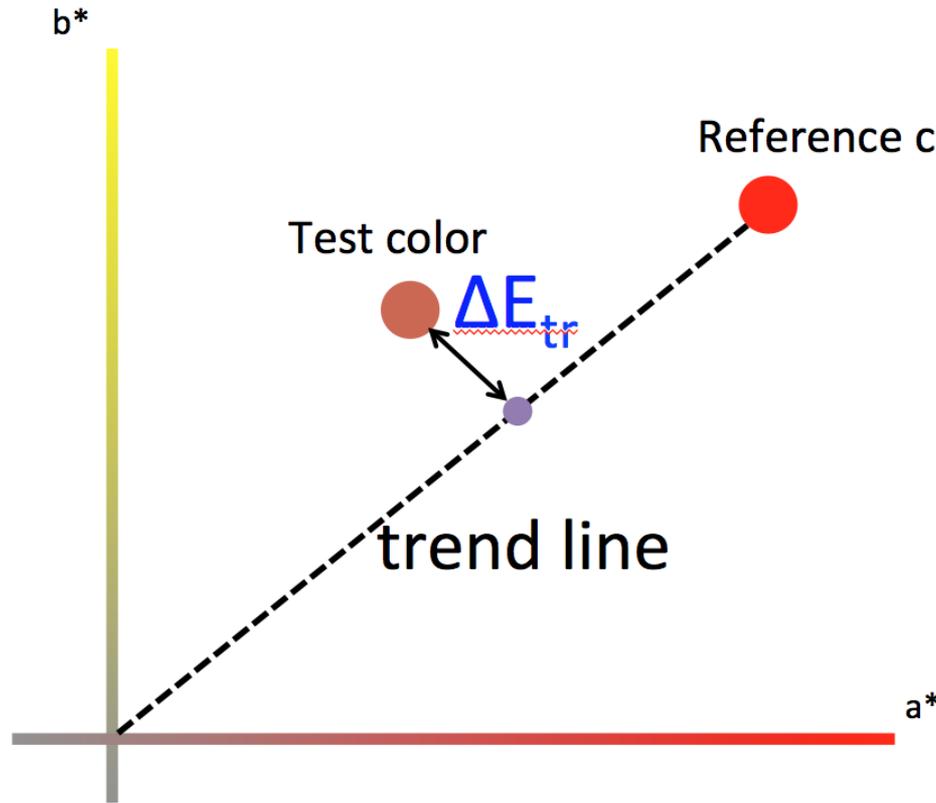
# Stimuli

- Original Image: AdobeRGB samples (SCID, Roman16 etc.)
- Display White: D50
- Printer Gamut (3 different sizes: CRPC7, 5, 3?)
- Several mapping methods (Printer B2A)



# Stimuli

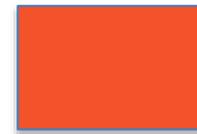
- Origin
- 
- Displa
- Printe
- Severa



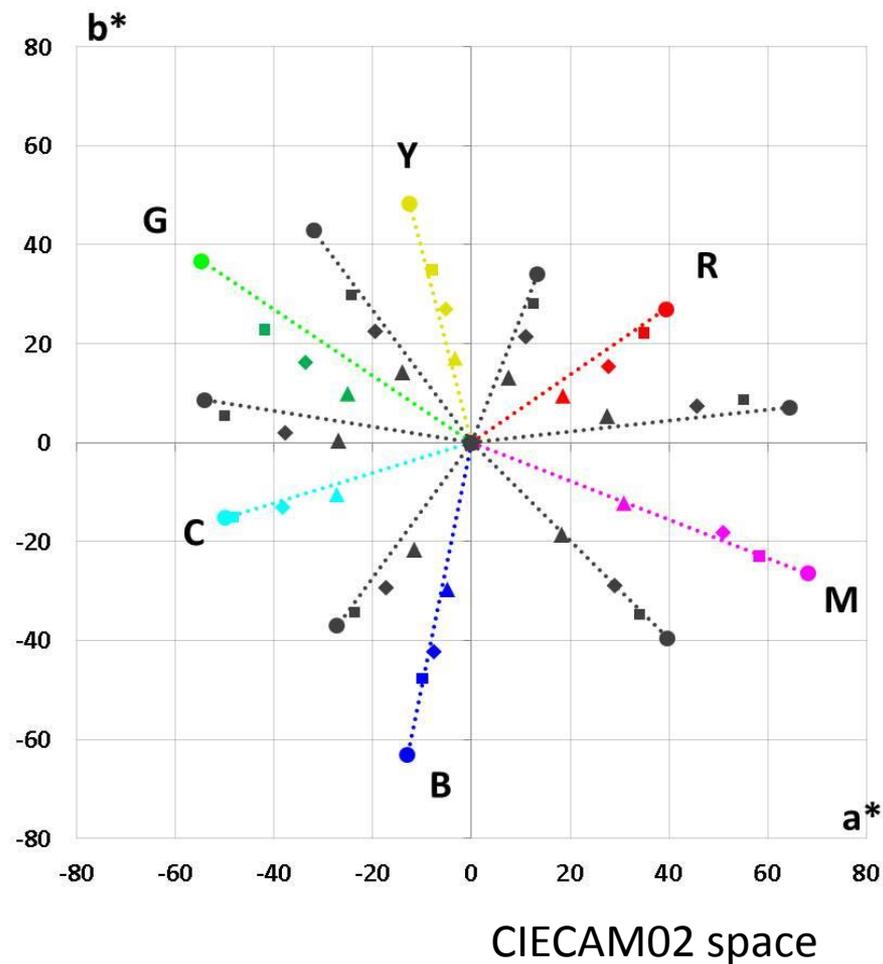
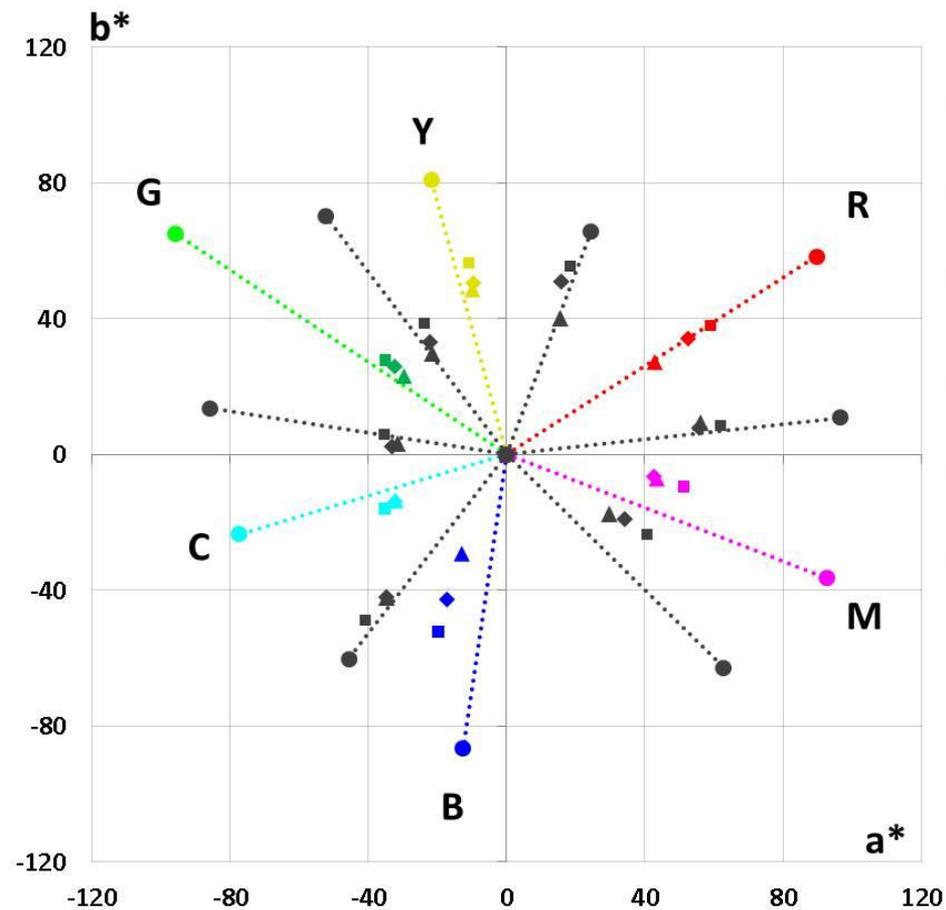
Reference color (ice colors

(7, 5, 3?)

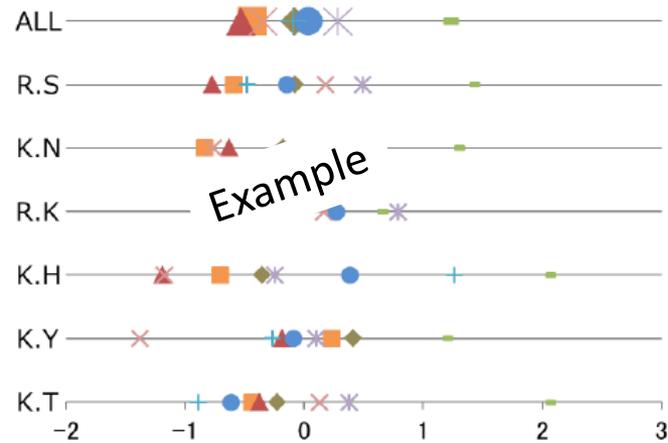
A)



# Trend line (consistent color loci) ( for CRPC7, CRPC5, and CRPC3)



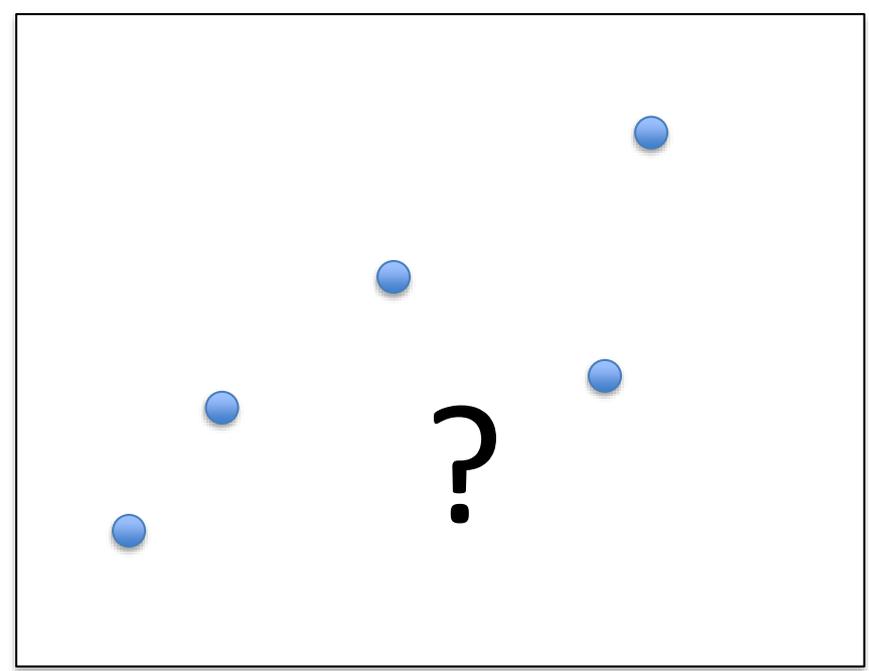
# Analysis



Example

calculating Z-score

Score



$\Delta E_{tr}$

