Research Plan

∼ Is trend-line applicable to predict CCA? ∼



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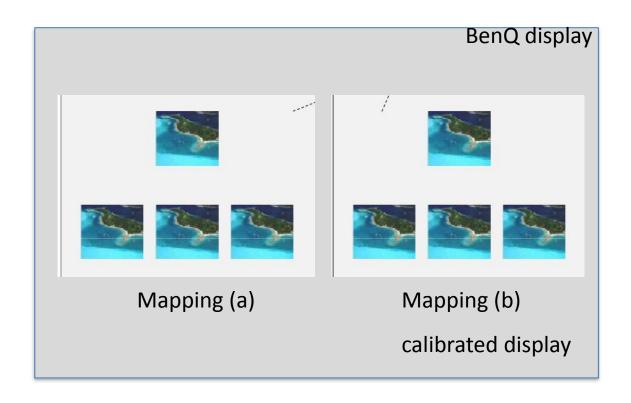
Purpose

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)

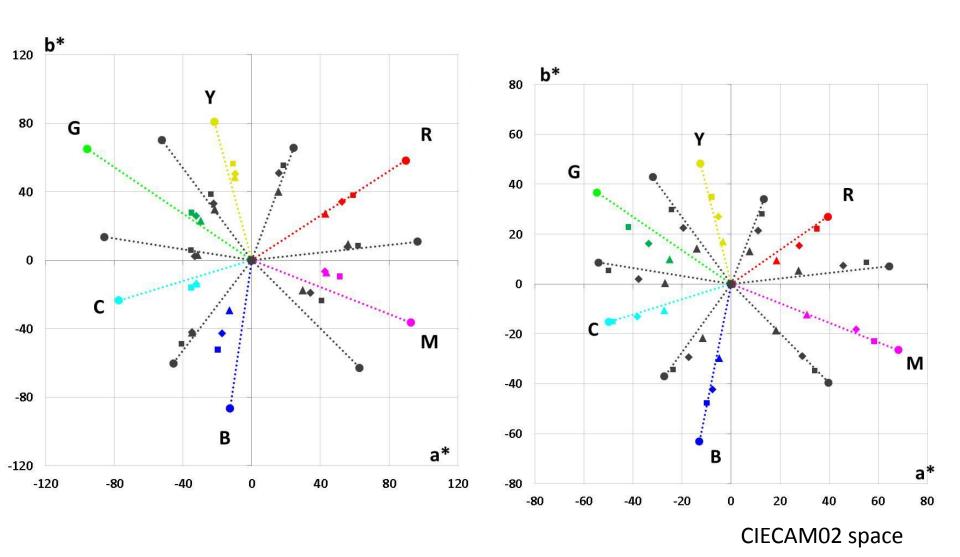




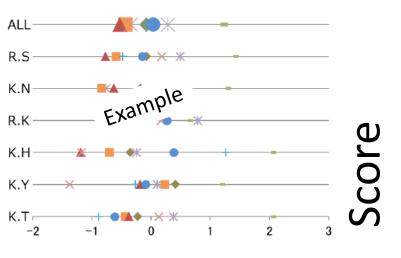


Stimuli Origin Reference color Ce Colors **Test color** Displa Printe 27, 5, 3?) trend line Severa

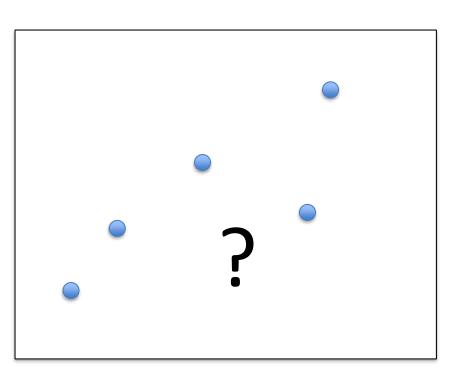
Trend line (consistent color loci) (for CRPC7, CRPC5, and CRPC3)



Analysis



calculating Z-score



 ΔE_{tr}

Schedule (Yamagata Univ.)

Action Item	2017			2018						2019	
	Jul. Aug.	Sep. Oct.	Nov. Dec.	Jan. Feb.	Mar. Apr.	May Jun.	Jul. Aug.	Sep. Oct.	Nov. Dec.	Jan. Feb.	Mar. Apr.
(Milestones)	F2F	₹ Mtg.	(Web	Mtg.)			F2F	Mtg.?			
Protocol Design	- Proce	edures litions	Mo	odificatio	n	Mod	ification				
Preparation (Stimuli, program)		gramming nulus	9								
Verification of the setting		*	→								
Preliminary Experiment		<→ Design	\longleftrightarrow				>				
Experiment				Expe	eriment 1		Experi	ment 2			
Analysis						←→					
Metric for CCA								<			→