ICC/HP Digital Print Day, Sant Cugat, Spain

Comparing colour gamuts

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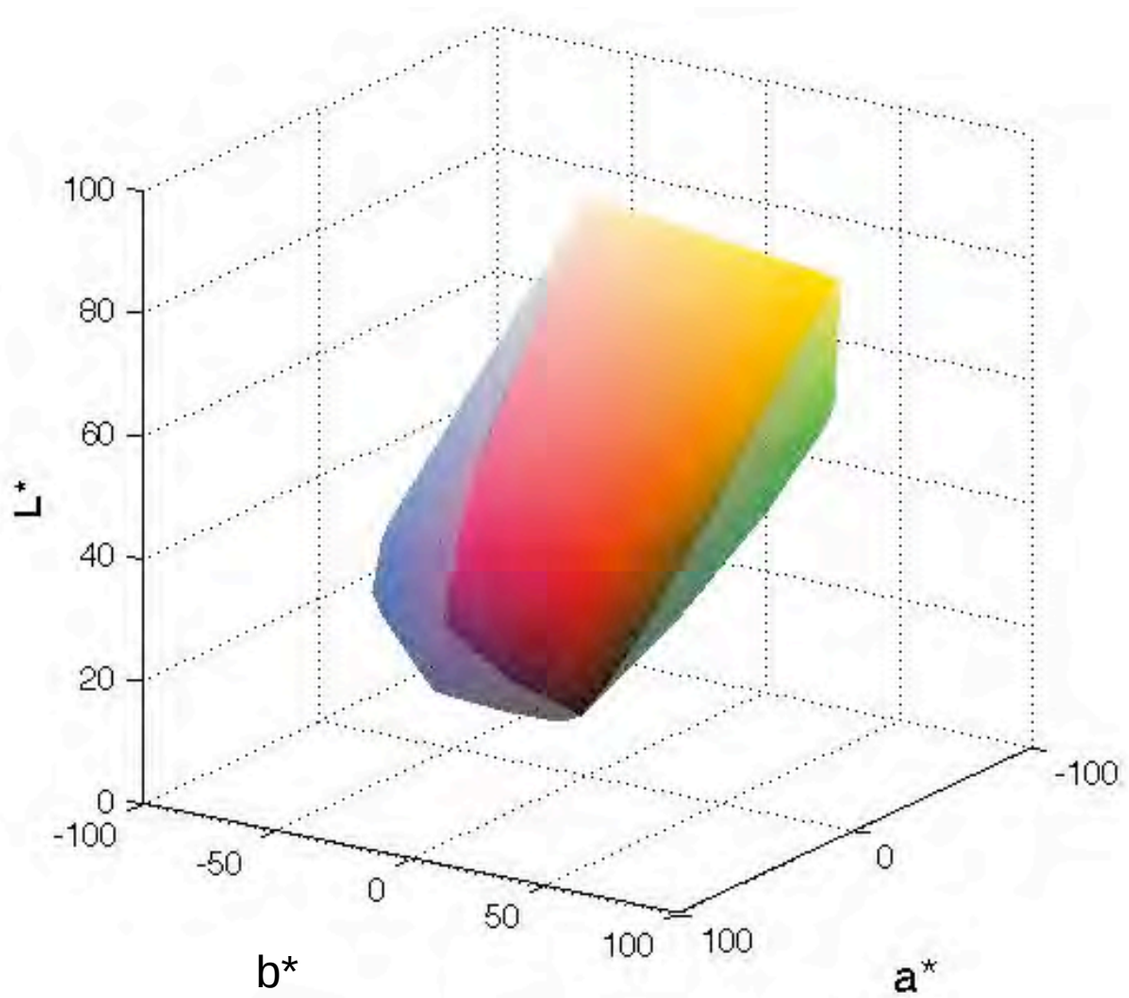
Objectives

- Analyse and compare two colour gamuts
- Propose a metric for comparing two colour gamuts

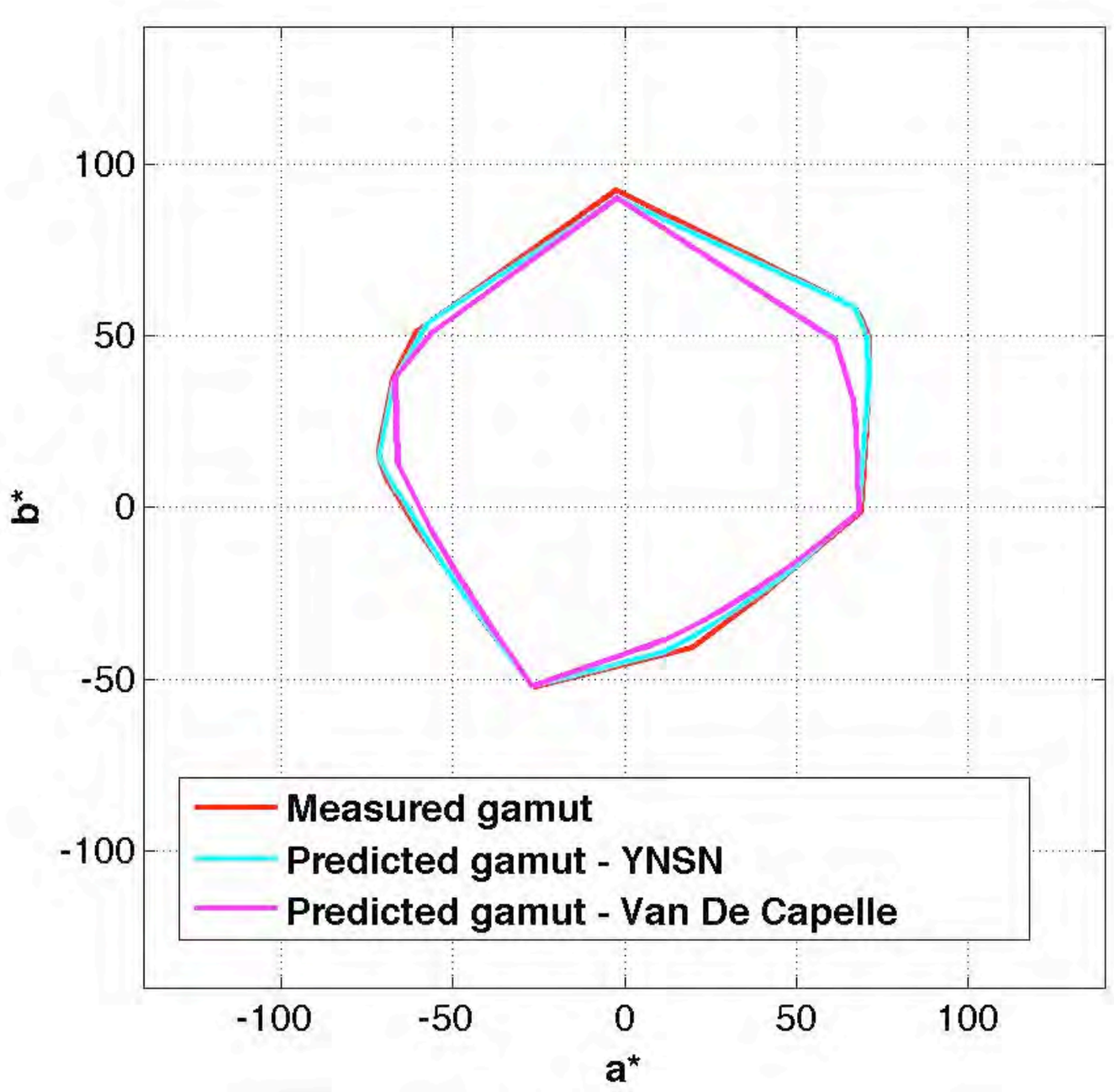
Problem

- Difference in gamut volumes - poor indicator
- Two gamuts having the same volume may not coincide
- Can we quantify the difference between two gamuts?



Introduction

- Actual gamut vs. predicted gamuts



Metric for comparing two gamuts

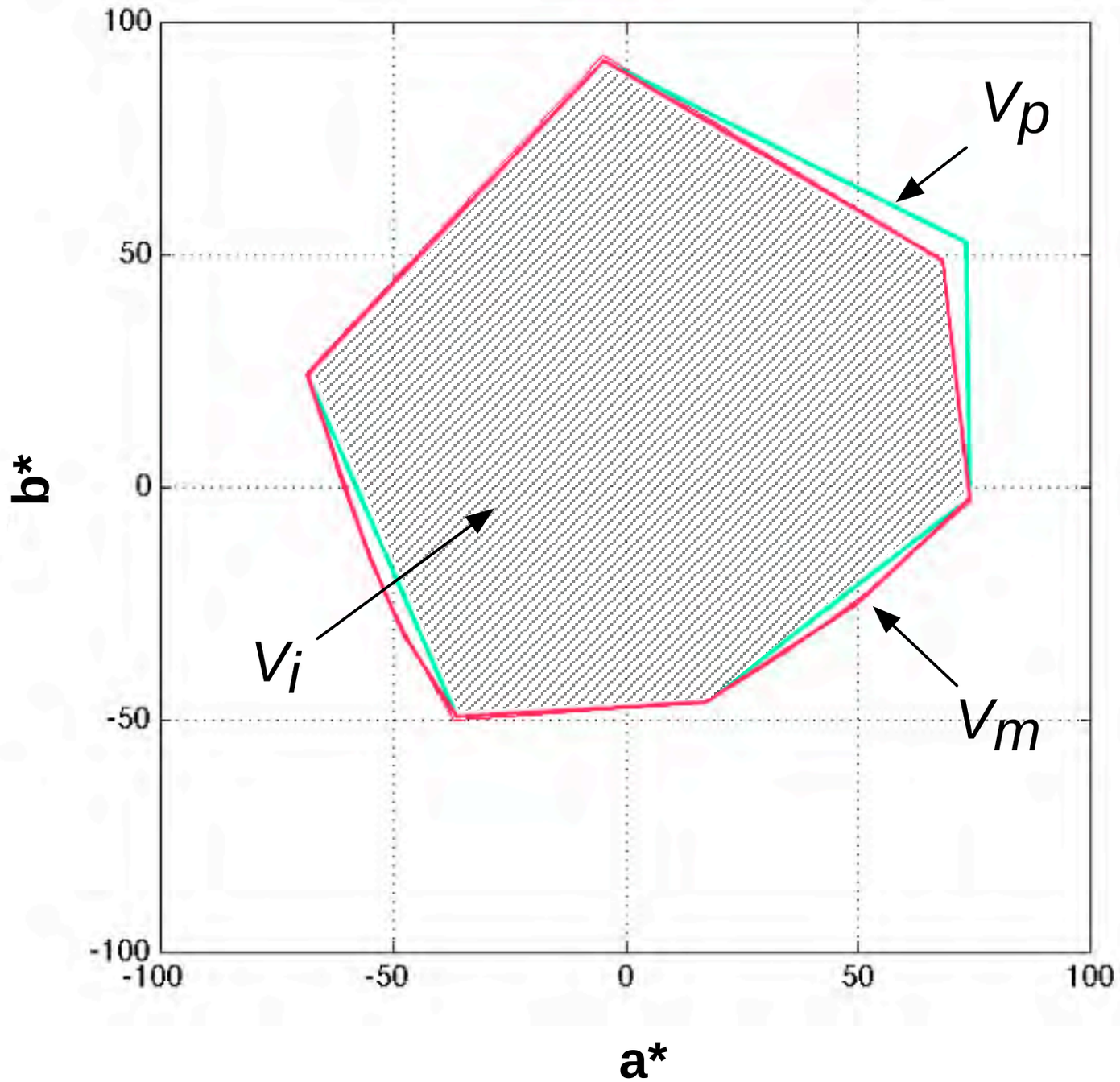
- Gamut index - how closely the predicted gamut matches to the measured gamut

$$GI = \left(\frac{V_i}{V_m}\right) \cdot \left(\frac{V_i}{V_p}\right)$$

$$GI = \frac{V_i^2}{V_m \cdot V_p}$$

V_m : volume of the measured gamut
V_p : volume of the predicted gamut
V_i : volume of intersection of the two gamuts ($V_m \cap V_p$)

Gamut index



Summary

- Gamut index - a single metric for comparing two gamuts
- No information about a specific colour region
- Applications

- *Matching the proofer-gamut to the press-gamut (or standard printing systems like ISO 12647)*
- *Matching the model-predicted gamut to the actual gamut*

Thank You!

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