Image complexity and manipulation recognition by eye gaze

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Overview

- Introduction
- Plan
- Image complexity
- HCC Workshop
- Conclusion and future work
Introduction

- Image manipulation is achievable by normal people
- Eye gaze tracking is useful to understand how we view images
- Interest in to what extent that human could figure out manipulated images
- Image complexity is not well understood
Plan

- Literature survey - image complexity
- Extend tool for display recording of eye gaze (interest areas)
- Implement metadata functionality
- Experiment to detect subject responses to manipulated images
- Extend experiments to different kind of manipulation - high, low complexity region in different complexity levels images
- Integrate all code into HCC Workshop tool
Image complexity - why

- The factor might effect how people view images
- Difficulties for people figure out manipulations
- Different options for manipulations
Image complexity - how to identify

Human
- attention model

Computer
- JPEG compression ratio
Types of manipulations (gimp)

Locations
- low or high complexity regions in each complexity level

Addtion

Omission

Color changes
HCC Workshop

- Human Centred Computing research group
- Platform for student staff to develop and contribute applications
- Version 2.0
Conclusion and future work

- Current work mainly focuses on literature survey and learning program and manipulation skills which are needed

- Next step is to plan experiment to detect subject responses to manipulated images