

Medialogy Aalborg Niels Jernes Vej 14 - 9220 Aalborg Øst http://www.medialogi-aalborg.dk

Title: Magic Canvas

Theme: Visual Computing

Project period: September-December 2012

| Project group: MTA 123 Participants: | 338 | |
|--------------------------------------|-----|--|
| Gustav Dahl | _ | |
| Johannes Møjen | _ | |
| Maximilian Müller | _ | |
| Marco Winther | _ | |
| Marta Botella | _ | |
| Simon Jakobsen | _ | |
| Supervisors: | | |

Thomas B. Moeslund Andreas Møgelmose

Circulation number: [need data!!!]

Pages: [need data!!!]

Attachments: [need data!!!] Finalized date: [need data!!!]

Abstract:

The theme for this project is Visual Computing. The group has been in collaboration with Hjørring Library in developing an installation called Magic Canvas. The goals are to make an entertaining installation that can be enjoyed by people of all ages. The Magic Canvas utilizes an infrared webcam to capture video of people casually passing by, displaying them on a big canvas as a Christmas-related character. To make the camera get a clear contrast, infrared LED strips are placed near the canvas. The software is mainly written in C++, using the OpenCV library to extract video information. The Unity game engine is then used for visualization. To detect people with the camera, various image processing techniques have been thresholding, used, such as background subtraction, region of interest and BLOB analysis. The any program is working without physical devices, and it does not require any external maintenance. The program ran throughout December 2012.

The content of this report is freely available, but publication (with source reference) can only happen by agreement with the authors.