Room Scanner
3D programming with OpenGL

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RoomScan

RG & MW

Introduction
Technologies
Architecture

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Pro's and Con's
Problems
Occurred
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The Project

- The vision of a human being will be expanded by information about the environment
- The information that will displayed is, if a classrooms status is occupied or free.
- Uses QR-codes, which are sticked to the classrooms entrance.
- Scanning this code using the Vuzix M100.
- An image will be projected on the plate and indicates whether the classroom is occupied in the next lesson or free.

Projections

Technologies

- Vuzix Smart Glasses M100 with Flash Image v2.4.3
- Android is the OS.
- Built-in *Scanner* App for QR-Code scanning.
- OpenGL ES to project the two images.

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Architecture

- MainActivity, which starts the internal *Scanner* App
- Using a built-in *Scanner* App to scan the QR-Code.
- RenderActivity, which renders the OpenGL Elements
- OpenGL Elements, which indicate if a room is free or not.
- TableReader, which loads the room informations.

Google Card Board

- Not applicable for Augmented Reality
- Both eyes are needed
- Complex topic — additional things like iBeacon, etc. are needed
- Not comfortable

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Vuzix M100

- Is applicable for Augmented Reality
- Almost no information / no community support (limited access) according to the room information
- Vuzix decided to restructure the website and misplaced information

Pro's

- Vuzix use Android as OS and nothing new.
- Software is running on Microsoft Windows 10
- Uses Eclipse as IDE

Con's

- Flashing and working with Vuzix needs Microsoft Windows
- Vuzix webpage is mostly unreachable and shows only 404-Pages
- Only less informations in the internet

Problems Occurred

- Connect the Vuzix M100 — only Microsoft Windows
- Flashing Vuzix M100 — needs a lot of time
- QR-Code scanner — needs Flash Image higher than 2.x
- Too few available working hours
- Fontys classroom planning — not available

Do you have any Questions?