# Room Scanner

## 3D programming with OpenGL

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# The Project

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- 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.

**Examples for some possible 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.

# Architecture

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- 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.

# Pro's

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

# Con's

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

# DEMO

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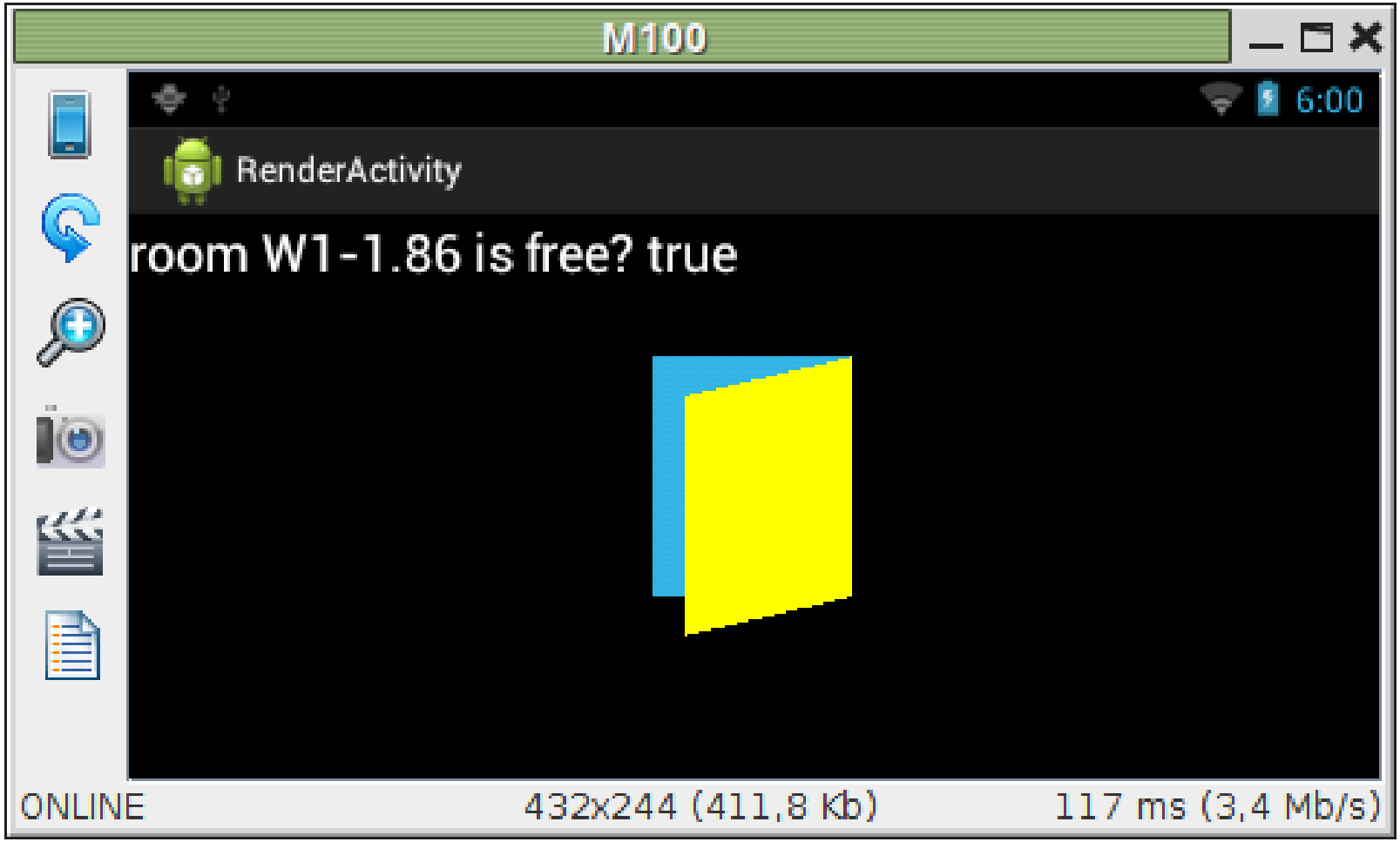


Figure: Screenshot from Vuzix M100: Room is free!

# Problems Occurred

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- 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?