

Topics

Last week summary

Deep dive: LaneDetection.cpp and PrecedingRoverDetection.cpp

Next steps

Last week summary

Autofocus3 Installation

Meeting dates

- No common ground → Sub-groups
- Tuesday in Garching for Sync
- Thursday after official meeting

Test case 1 to 3 breakdown (later)

Programming language choice

- C++
- ~~Python~~
- Matlab (to C via Coder)

Deep dive: Rover detection

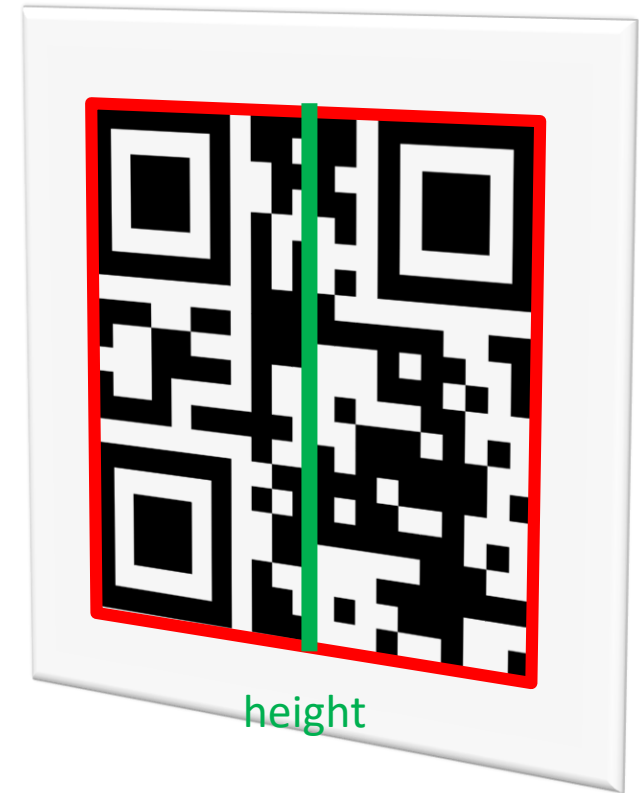
zbar::ImageScanner

4 corner points

Average size in y-direction [px]

$$distance = \frac{0.87}{35} \times \frac{100mm \times 480px}{height}$$

Rover ID + detected = true



Next steps: Test case 1

Stop in front of QR code (rover)

Existing PrecedingRoverDetection.cpp code enough

Getting used to the hardware

Till next Thursday



Next steps: Test case 2

Existing code no longer sufficient

Expand vision and interface:

- Position (2D) + orientation required

Path planning and path following

Sophisticated environment model not required

Three work packages:

- QR code location (sense)
- Path planning (plan)
- Path following (act)



Next steps: Test case 3

Without simplification:
Full parking task (static!)

Environment model required

Lidar sensor

