G.U.A.R.D

Gothenburg Unoffical Assistive Response Device

Project Proposal – JAN 29th

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4 Main Functions

- Tracking and following of a traveler for security
- Obstacle avoidance
- Mobile application
- Additional camera support

System Parts

- Arduino Mega 2560: used for controlling the car.
- Raspberry Pi 3: main operative system
- Mobile device: operative system android
- Rechargeable battery: allows the Raspberry Pie to be powered
- 4G-dongle: allows information to be transferred between phone application and car when without reach of bluetooth or wireless
- Compass/GPS module: navigation
- Ultrasonic sensor: avoidance detection
- IR sensor: avoidance detection
- Odometer: measure speed and distance
- Camera: monitoring the traveler
- Microphone: monitoring the traveler

http://cmuems.com/2012/c/files/2012/11/boxie.jpg

FUNCTIONS

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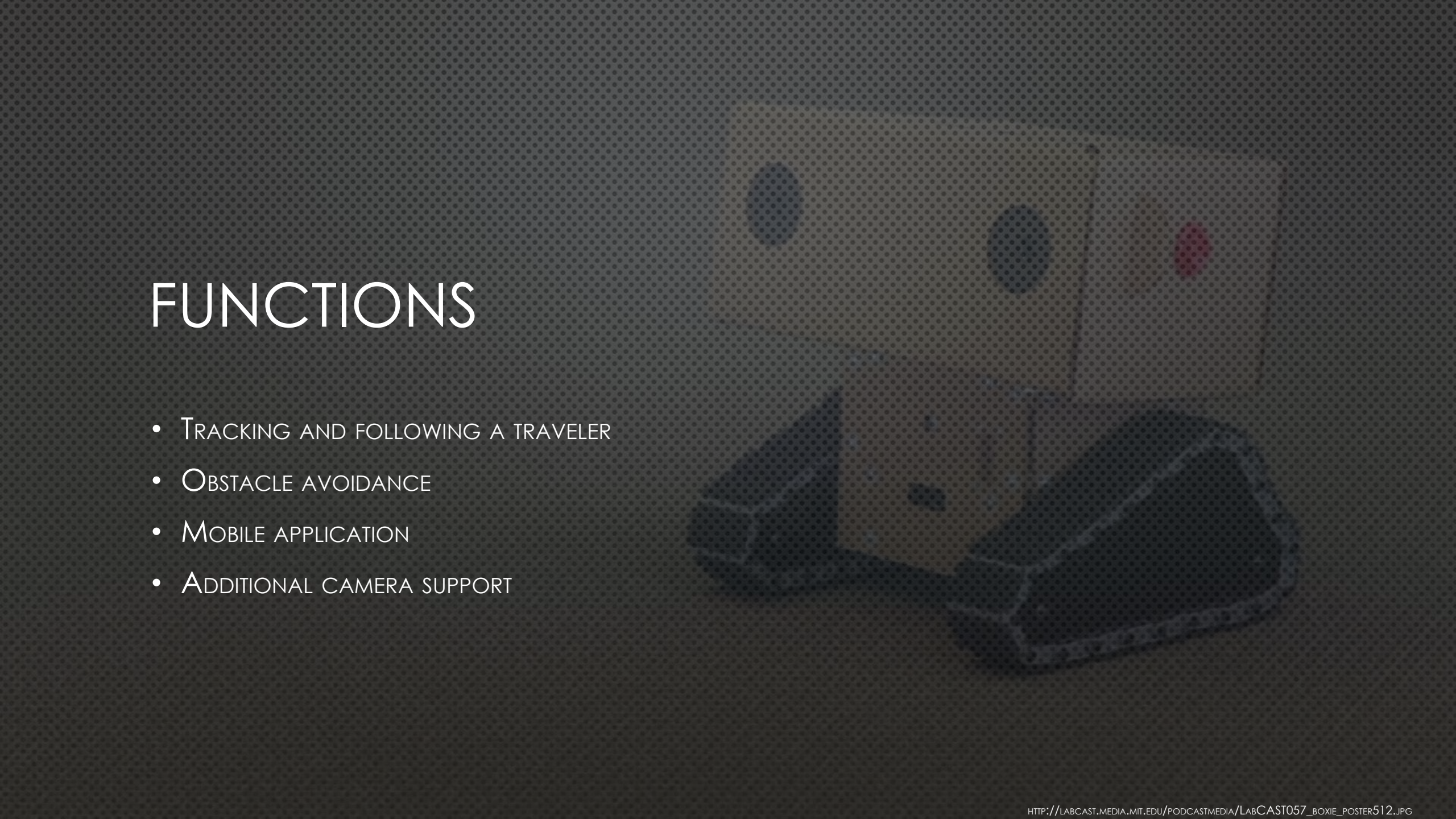

http://labcast.media.mit.edu/podcastmedia/LabCAST057_boxie_poster512.jpg

SOFTWARE & DEVELOPMENT ENVIRONMENT

- Android studio
- PyCharm/Eclipse plug-in
- Vim
- Arduino IDE

DEMONSTRATION

- Live demo outside

- Video