Jonas Malassa - malassajo61773@th-nuernberg.de   24.05.2017
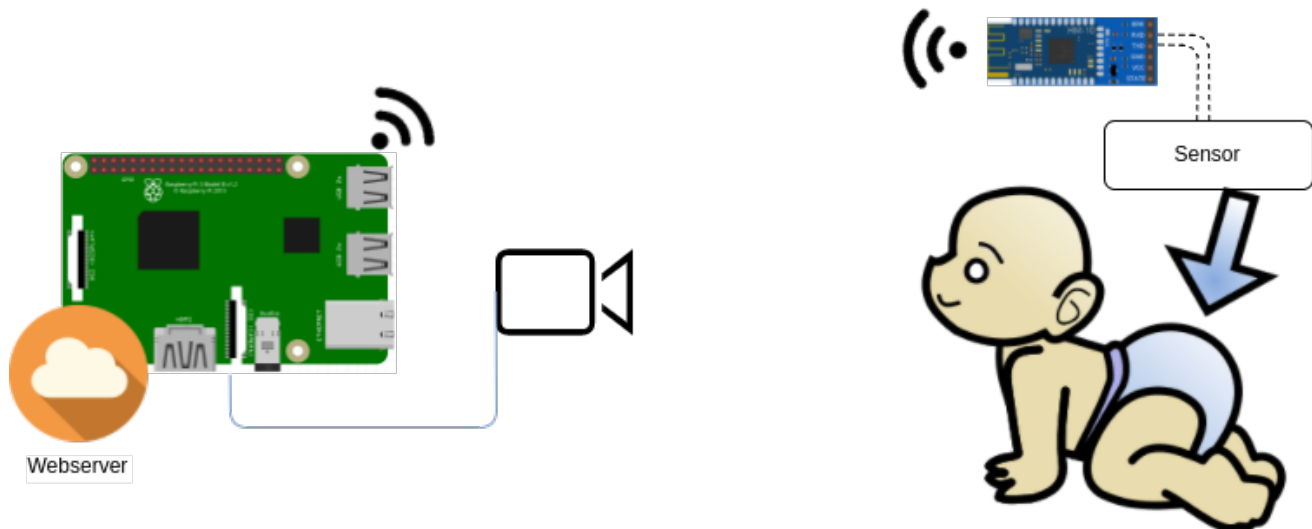
Poop Face Detection

Illustration 1: The poop face detection system

Communication between the sensor and the evaluation system

- Using Bluetooth Low Energy with an HM10 module on the sensor side.
- Be aware of Copycats if you get an cheap HM10 from eBay or amazon.

- Hcitool & gatttool are the standard linux tools for interacting with BLE devices.
        (Tutorial: https://www.jaredwolff.com/blog/get-started-with-bluetooth-low-energy/)

- Using pygattlib to use BLE programming in python
        (Examples: https://github.com/matthewelse/pygattlib/tree/master/examples)

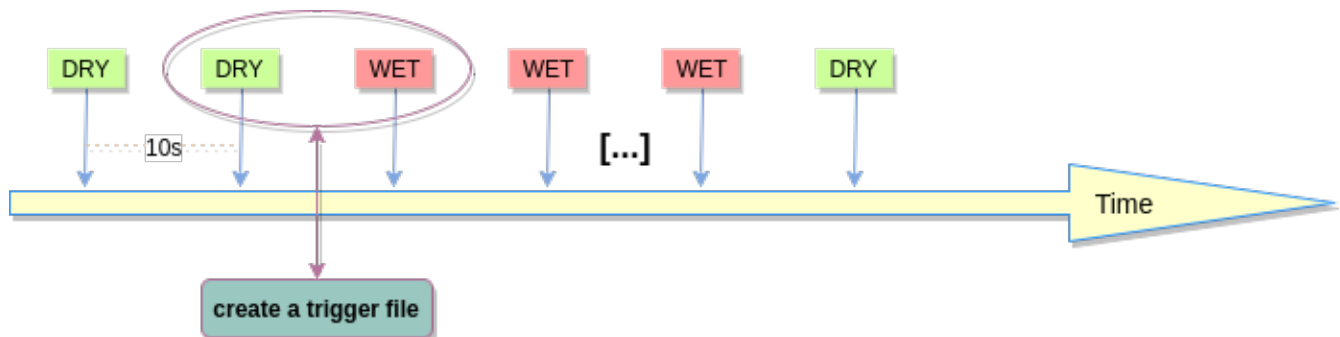- Used connection timing

Illustration 2: connection timing

Implementation of the recording feature

- Using trigger files to detect a signal
- Buffering Video stream
- Changeable before and after trigger recording time through a configuration file
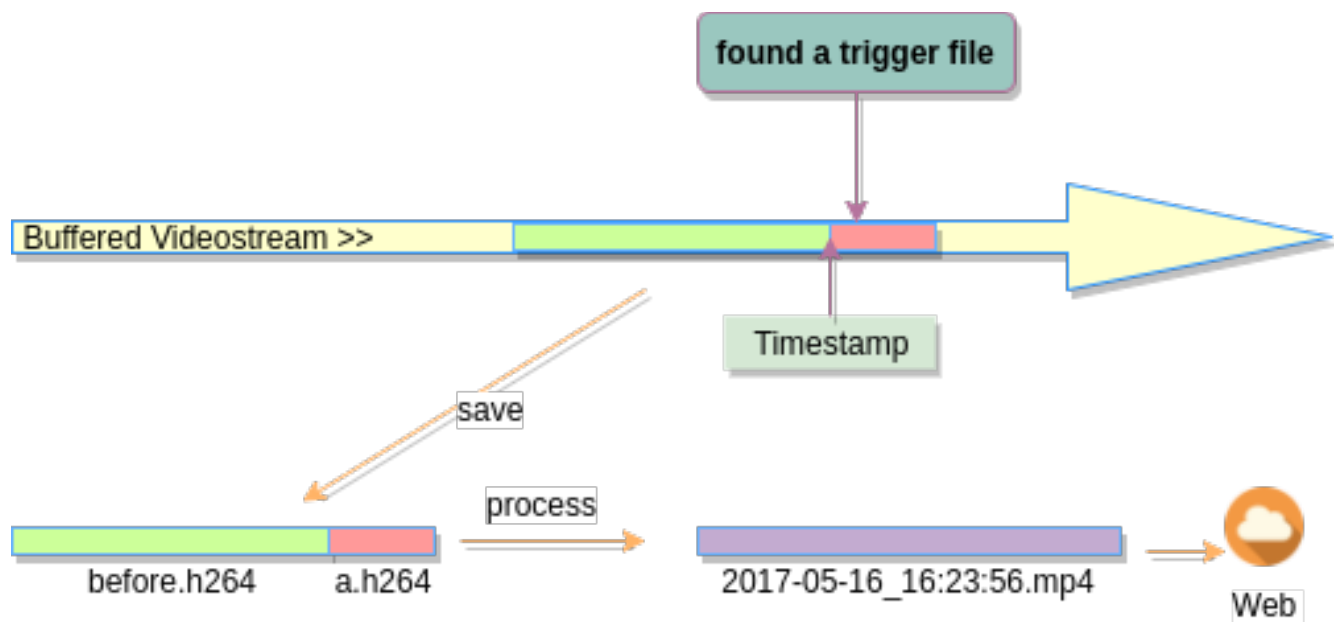- Post processing of the two saved .h264 files to one mp4 video file

Illustration 3: the recording process

Conclusion

What we achieved?
- Sending signal over BLE and save the recorded videos

What comes next?
- Creating a Webserver which displays the recorded video files

Related Topic:
Developing the diaper sensor: See presentation from Mirjam Lindner

The presentation and handout files can be found under the following link:
https://github.com/jomaway/poop-face-detection_documentation/tree/master/extras