# Zwischenstand Smart Human Detection
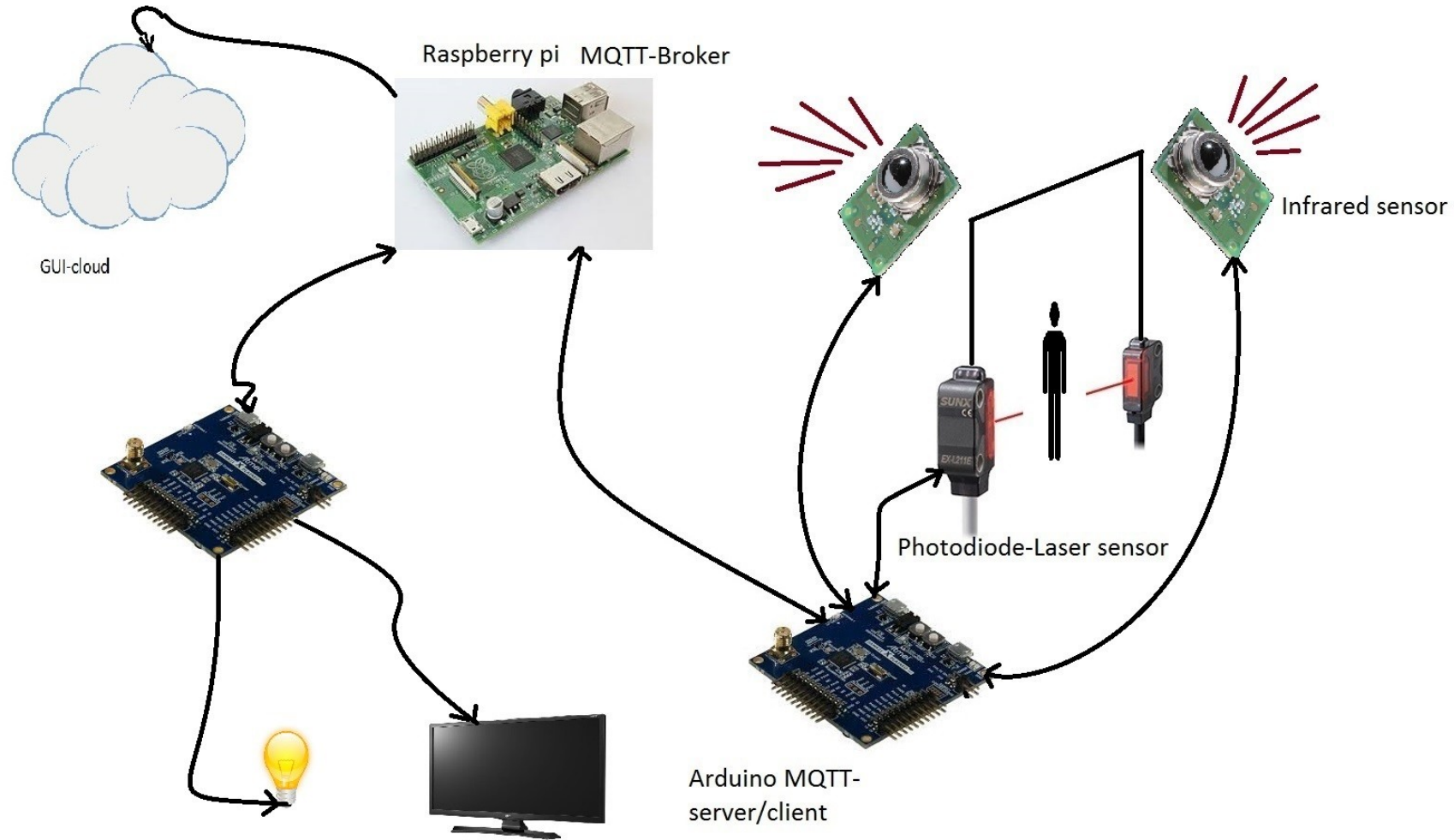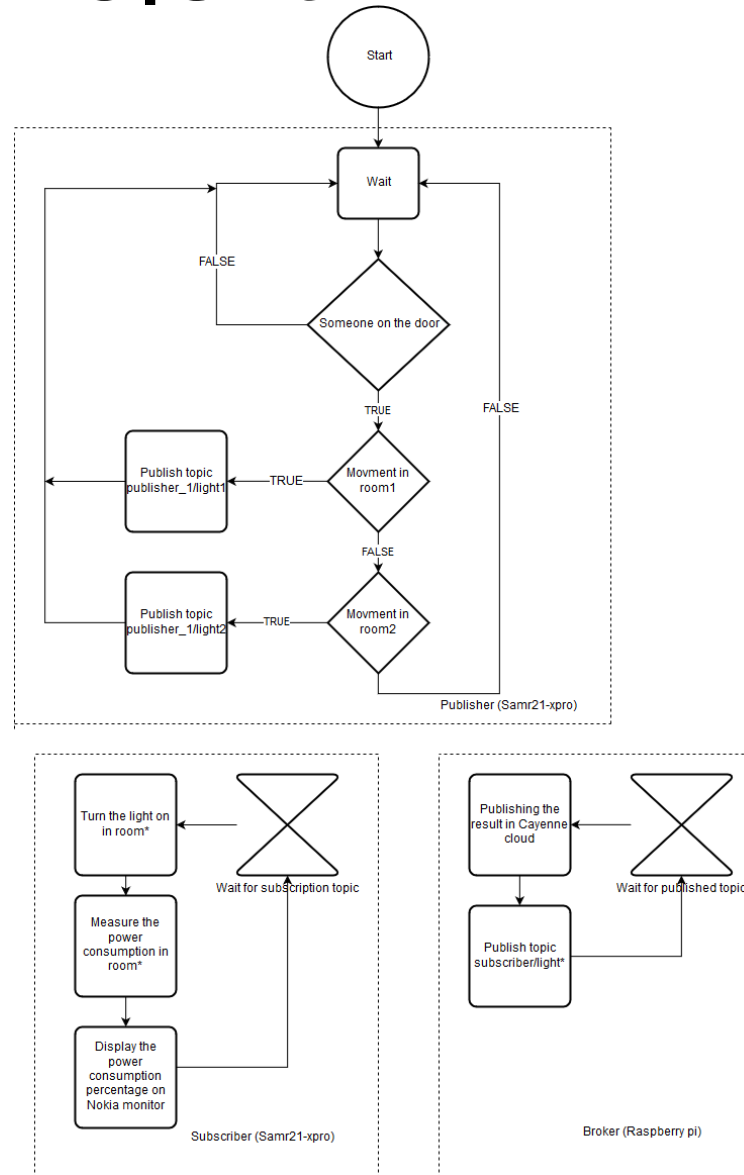
Michel Kapell, Alhajras Algdairy, Sebastian Szymczak

# Was war unser Projekt?
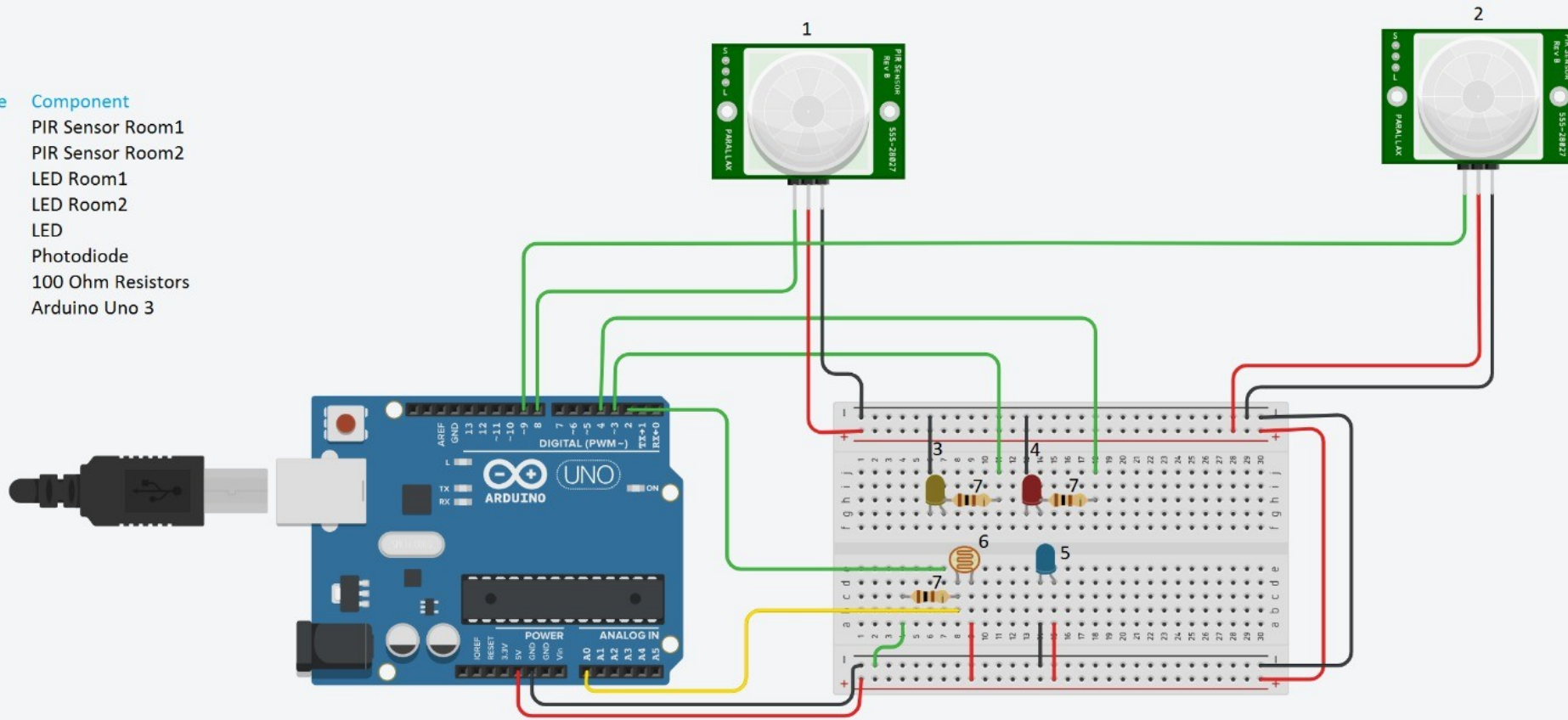


GUI-cloud

Raspberry pi   MQTT-Broker

Infrared sensor

Photodiode-Laser sensor

Arduino MQTT-
server/client

# Was war unser Projekt?

# Publisher



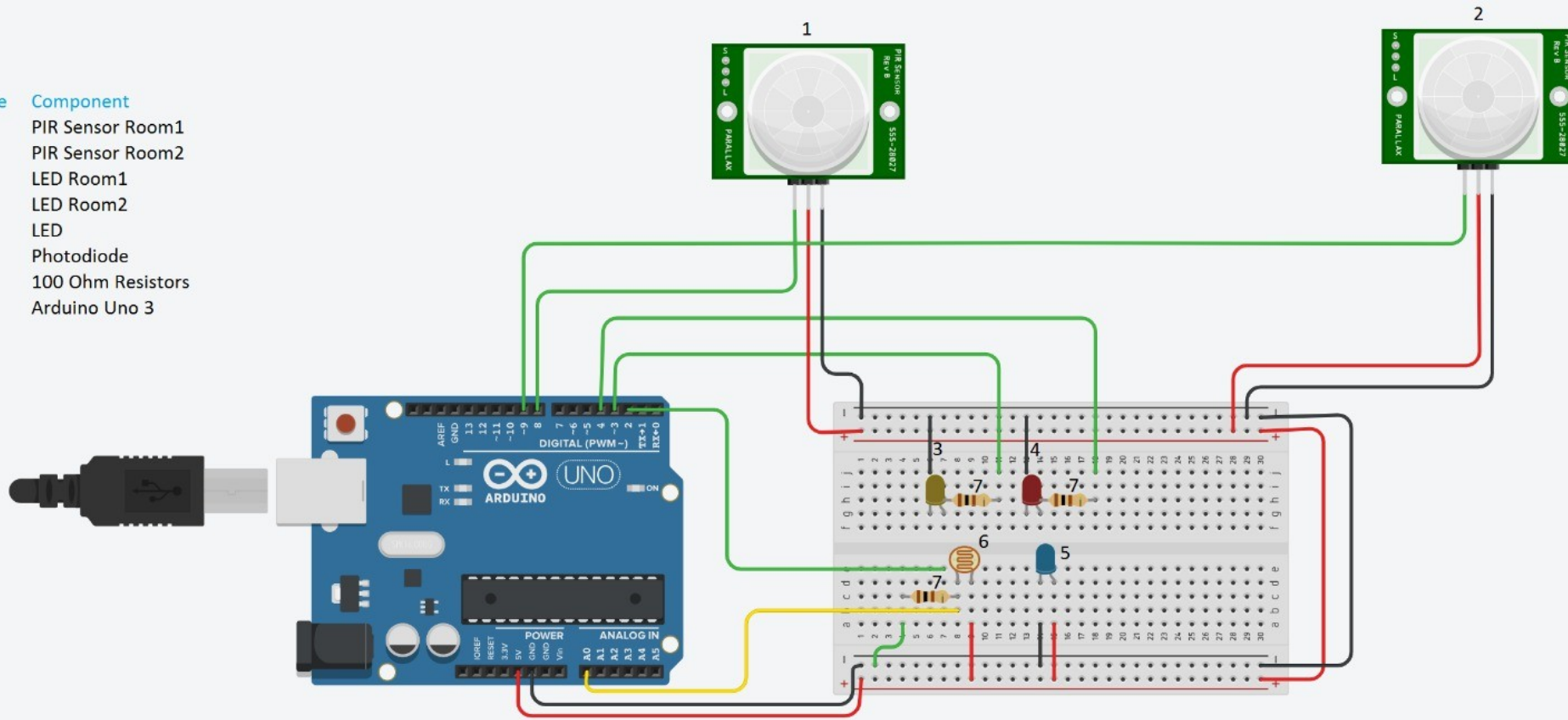| Lable | Component |
|-------|-----------|
| 1 | PIR Sensor Room1 |
| 2 | PIR Sensor Room2 |
| 3 | LED Room1 |
| 4 | LED Room2 |
| 5 | LED |
| 6 | Photodiode |
| 7 | 100 Ohm Resistors |
| 8 | Arduino Uno 3 |

# Publisher

```
Movement has been detected in room 1
Published 16 bytes to topic 'subscriber/light_1 [4]'
```

```
Movement has been detected in room 1
Published 16 bytes to topic 'subscriber/light_1 [4]'
```

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Movement has been detected in room 1
Published 16 bytes to topic 'subscriber/light_1 [4]'
```
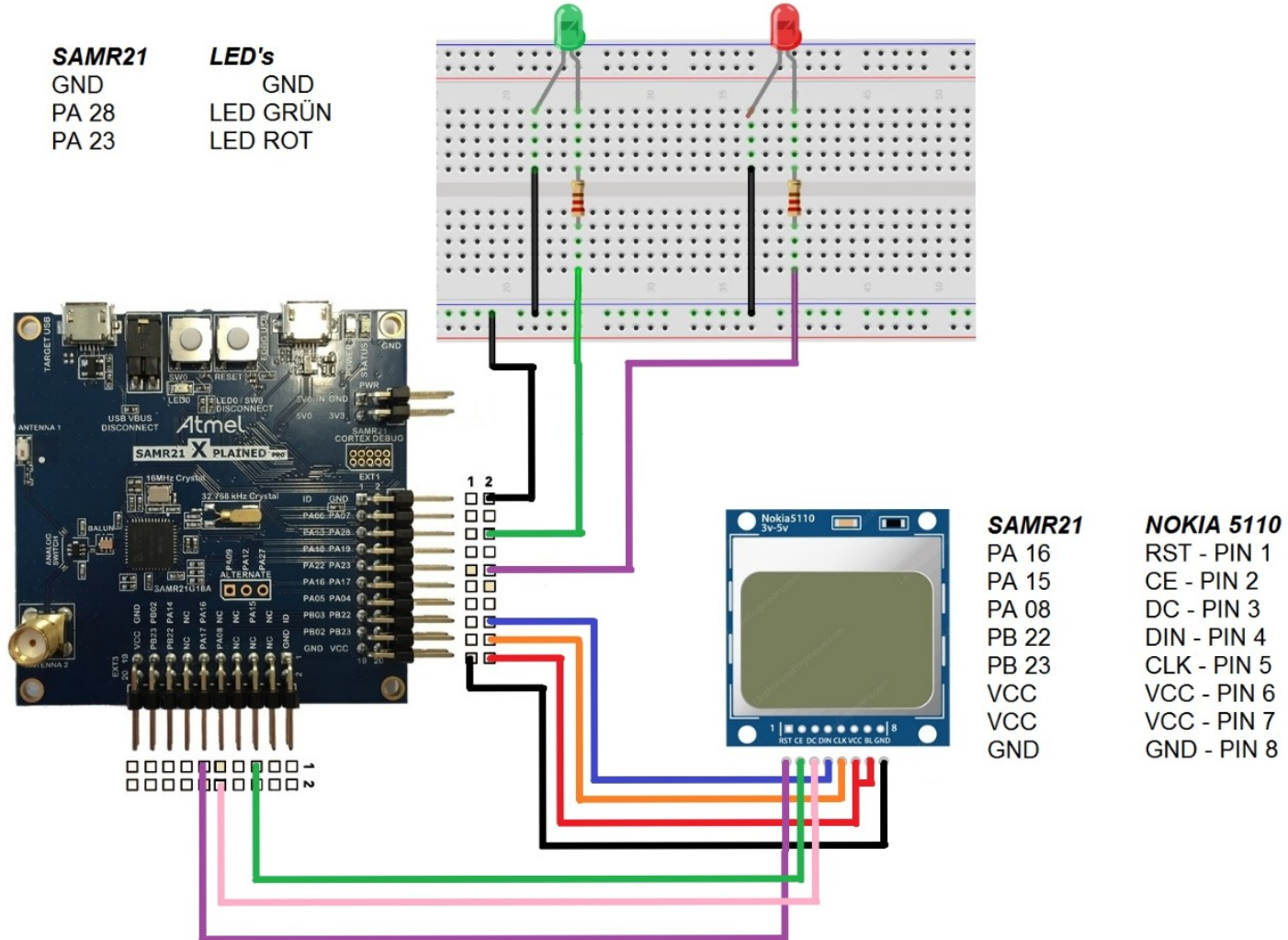
# Publisher



| Lable | Component |
|-------|-----------|
| 1 | PIR Sensor Room1 |
| 2 | PIR Sensor Room2 |
| 3 | LED Room1 |
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| 6 | Photodiode |
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# Subscriber



| SAMR21 | LED's |
|--------|-------|
| GND | GND |
| PA 28 | LED GRÜN |
| PA 23 | LED ROT |

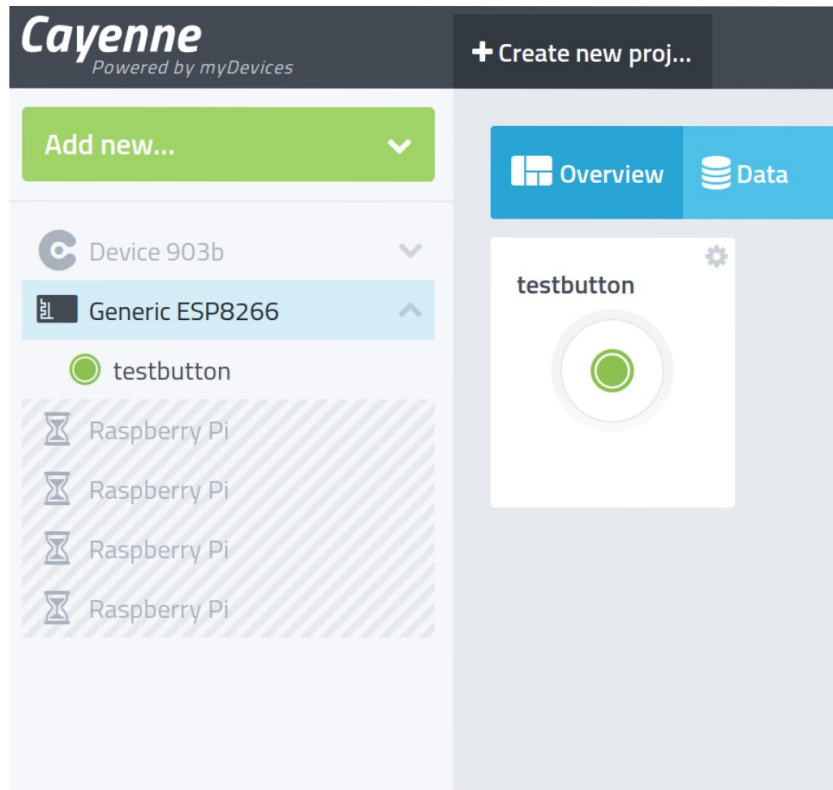| SAMR21 | NOKIA 5110 |
|--------|------------|
| PA 16 | RST - PIN 1 |
| PA 15 | CE - PIN 2 |
| PA 08 | DC - PIN 3 |
| PB 22 | DIN - PIN 4 |
| PB 23 | CLK - PIN 5 |
| VCC | VCC - PIN 6 |
| VCC | VCC - PIN 7 |
| GND | GND - PIN 8 |

# Subscriber



```
vagrant@vagrant: ~/Tutorials/RIOT/app/shd_subcriber

2018-11-28 15:06:19,863 - INFO # Successfully connected to Gateway
2018-11-28 15:06:19,881 - INFO # Now subscribed to Gateway light 1
2018-11-28 15:06:19,896 - INFO # Now subscribed to Gateway light 2
2018-11-28 15:09:43,385 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:43,386 - INFO # this is sensor 2
2018-11-28 15:09:44,412 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:44,413 - INFO # this is sensor 2
2018-11-28 15:09:45,440 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:45,442 - INFO # this is sensor 2
2018-11-28 15:09:46,467 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:46,468 - INFO # this is sensor 2
2018-11-28 15:09:47,496 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:47,497 - INFO # this is sensor 2
2018-11-28 15:09:48,526 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:48,527 - INFO # this is sensor 2
2018-11-28 15:09:56,596 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:56,597 - INFO # this is sensor 2
2018-11-28 15:09:57,623 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:57,623 - INFO # this is sensor 2
2018-11-28 15:09:58,647 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:09:58,649 - INFO # this is sensor 2
2018-11-28 15:10:04,706 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:10:04,707 - INFO # this is sensor 2
2018-11-28 15:10:05,734 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:10:05,734 - INFO # this is sensor 2
2018-11-28 15:10:06,758 - INFO # got publication for topic 'subscriber/light_2'
2018-11-28 15:10:06,758 - INFO # this is sensor 2
2018-11-28 15:10:08,811 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:08,811 - INFO # this is sensor 1
2018-11-28 15:10:09,837 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:09,837 - INFO # this is sensor 1
2018-11-28 15:10:10,867 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:10,867 - INFO # this is sensor 1
2018-11-28 15:10:11,892 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:11,892 - INFO # this is sensor 1
2018-11-28 15:10:12,921 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:12,921 - INFO # this is sensor 1
2018-11-28 15:10:13,946 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:13,947 - INFO # this is sensor 1
2018-11-28 15:10:14,975 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:14,976 - INFO # this is sensor 1
2018-11-28 15:10:16,003 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:16,004 - INFO # this is sensor 1
2018-11-28 15:10:17,028 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:17,028 - INFO # this is sensor 1
2018-11-28 15:10:30,132 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:30,133 - INFO # this is sensor 1
2018-11-28 15:10:31,155 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:31,155 - INFO # this is sensor 1
2018-11-28 15:10:32,181 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:32,182 - INFO # this is sensor 1
2018-11-28 15:10:33,210 - INFO #  got publication for topic 'subscriber/light_1'
2018-11-28 15:10:33,211 - INFO # this is sensor 1
```

# Cayenne-Cloud und MQTT-SN Gateway

# Cayenne-Cloud und MQTT-SN Gateway Probleme

| Problem | Lösung |
| --- | --- |
| Client-ID bei Cayenne > 23 byte | Parser |
| Unsere Topics auf die Cayenne Topics mappen | Parser |
| Login bei Cayenne | Parser |

# Was haben wir vor?

- PIR-Sensoren über einen Transistor schalten  (power saving)
- LCD-Monitor beim subscriber hinzufügen
- messages vom publisher zur Cayenne-Cloud parsen
- Trigger in der Cayenne-Cloud hinzufügen

# Danke für Ihre Aufmerksamkeit