Milestone 3

Team pflanzen1

Goal for milestone 3

802.15.4 (LowPower)

Internet Connection
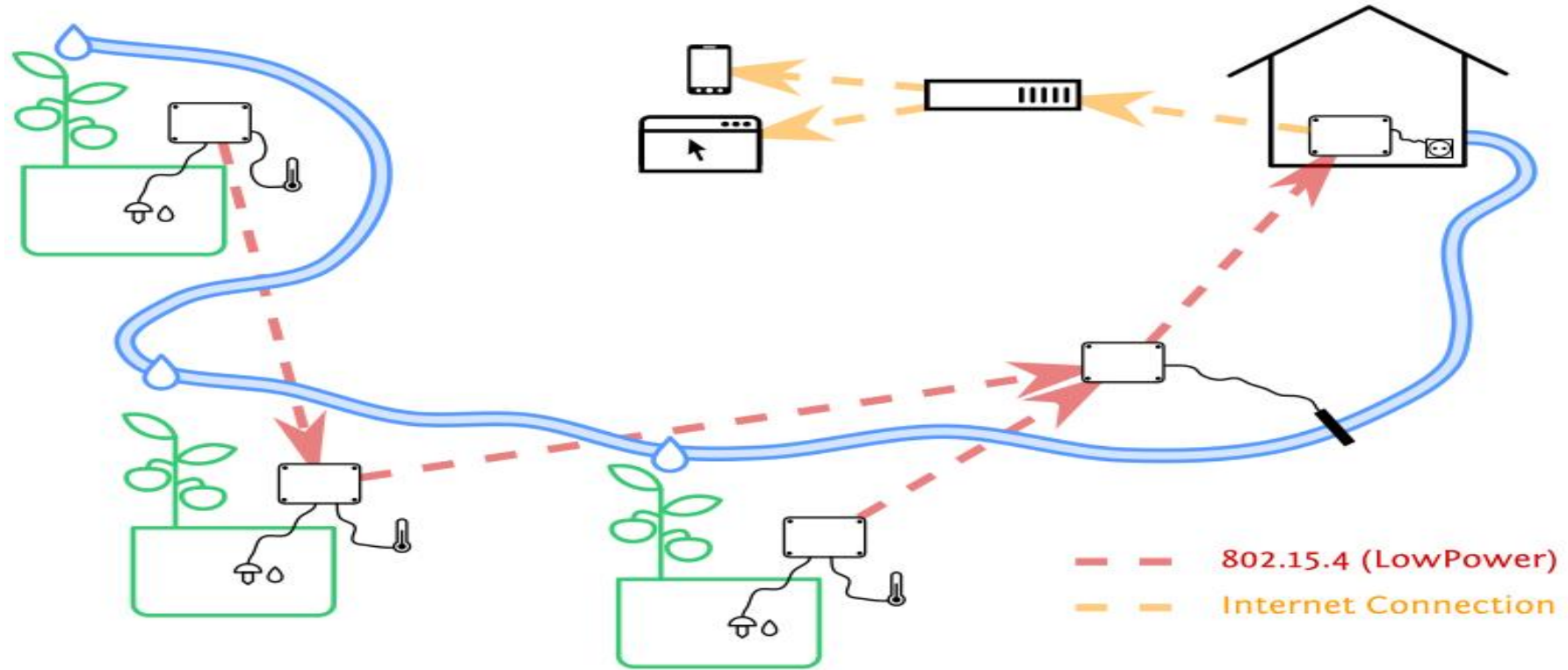
What happened since last time?

- Sensors
- Sensor nodes
- Collector node / Pump control
- Raspberry Pi gateway + Webserver

Sensors

- Last time: Could read from sensors
- BUT: Sensors seemed uncalibrated
- Issue with internal reference voltage for ADC unit
- Solved now, so we have sensible sensor data

Sensor nodes

- Last time: Could demonstrate sending data between nodes on native
- We can do so on hardware now
- Sending & Receiving run as background threads
- → nodes still responsive, problems can be diagnosed via shell
- Experiments with RPL on native with tabs
- Registered, set up & started first experiment with iot-lab test bed

Pump control

- Last Time:
  - Naive pump algorithm
  - Connect pump directly to samr-xpro board
- Replaced naive algorithm with PID controller
- Currently:
  - Connect pump directly to power source + control via relai
  - Have to collect sensor data and tune controller

Gateway + Webserver

- Setup Raspberry PI Gateway
    - Not really tested due to lack of hardware
- Webserver running on http://45.76.92.149:66/
    - Able to collect and display sensor data

Bottom Line

- Did not completely reach milestone
- Collection of individual components
- Goal now: connect these
- Nice to have: multi-hop via RPL