Minutes

Location: Shed
Date: Tuesday 19th October
Not In Attendance: N/A

Attendance: Daniel Carl Beauchamp, Dharius Robinson, Natalie Mclaren

What's Been Done since the Previous Meeting:
No prior research was required for this meeting.

Topics discussed:

- **Talk of using MQTT** - lightweight client framework to send data from IoT devices.
    - Tested on mosquito etc.

- We realise we have a competitor: **GaugeMap**: http://www.gaugemap.co.uk/#!Map/Summary/2021/2137

- **Boppers** - and how to place them inside the tube. As well as how to place the tube in the river so it won't drift off. Weights? Attaching to supporting bridge concrete area?
    - Downside - not all rivers have a supporting bridge.

- **The model** - what are we going to model and how?
    - Area with water and a lego house model next to it.

- **Processor decision:**
    - The decision came down to how much power we need. One gives out much more power than the other. Has more bits.
    - We have decided to go with the **Arduino UNO ATmega328P** because:
        - It is the processor that we have and can test on.
        - Of its power efficiency - it will reduce the amount of power it will use.

- **Sensor decision:**
    - We agree that we aim for efficiency, what will work best > cost. Will choose a pricier sensor if it means it'll work best.
    - Pulleys - cheap but more complex meaning more room for errors.
    - Whilst we are leaning more towards ultrasonics (due to the fact it is what is being widely used for projects of this type), we will continue to look for a cheap laser. In the event we don't find one - we will go with ultrasonic.
        - Less room for error
        - Can consult the oxford flood project or other organisations using it should we need to. Lasers aren't used as much as ultrasonics.

- **Measuring the river level:**
    - Talk of whether we want to measure the level if it gets to a very low level:

        - No - we will focus on a specific range below and on top of the river and measure that.
- **Our focus:**
    - Local - Canterbury - we will focus on making this work in Canterbury as we are familiar with the town/the river.

What's Being Done:
Natalie has emailed Daniel Knox to find out when she can start prototyping cases in the shed (once Daniel confirms that there are no flaws with printing case).

The email also asks when Daniel B can start experimenting with the LoRaWan at the shed.

Further Discussion: