Monitoring Mum Technology List

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1   Original datalogger (2012)

Early (2012) Arduino clone (nanode) based on Atmel ATMega 328

Arduino IDE   www.arduino.cc

Arduino Mini Pro

Ultrasonic rangefinder SRF-02

Analogue temperature sensors MCP9701A

Data transfer by HTTP POST to Perl script on server

RRDTool database, RRD graph-generation tools running as CGI scripts

2   WiFi Prototype roomnodes (2016)

WeMOS D1 mini-pro

Arduino IDE with ESP8266 code-generator and libraries

https://github.com/esp8266

DS18B20 1-wire digital temperature sensors

SR501 PIR

Generic LDR light sensor

Homie software framework for MQTT communication:
https://github.com/marvinroger/homie

3   Home gateway

GL-Inet AR150 router running OpenWRT https://www.gl-inet.com/ar150/

Mosquitto MQTT broker

4   Server

Linux, Apache

Mosquitto MQTT broker https://mosquitto.org/

InfluxDB time-series database https://portal.influxdata.com/downloads

WSGI data-provider scripts written in Python

D3/Cubism rolling horizon-graph display https://square.github.io/cubism/
https://d3js.org/

OpenHAB home-automation bus https://www.openhab.org/

5   Future

Battery-powered roomnode with low-power radio

https://github.com/scalz/MyMultisensors looks promising

Lots of stuff on https://www.mysensors.org/

RFM69 radios (433/868MHz) or ZigBee perhaps?

ATSHA204A key storage / encryption / message digest chip

6   Open Source

Monitoring Mum on GitHub: https://github.com/afindlay/monmum