Minutes arising from the 1st Meeting of Group 25 Smart Fan Project

Time: 16:00 – 17:00

Date: 25/01/2024

Location: MW office

Present: RC, FO, RW

Apologies: None

**Minutes**

In the report we should motivate the need for electric fans in the first place as obviously these use energy - we are recognising that the damage of GW is already done and we need to find ways of adapting life around warming climates and ensuring that we do so in a sustainable fashion.

We could also refer to the paradigm shift of focusing our attention on heating solutions in the UK to cooling solutions as we are facing warmer conditions than we have historically.

For the demonstration, it would be good to quantify the power usage (and thus savings) due to the temperature control system by displaying this on the MSP430 screen - perhaps using some form of voltage measurement from the output of the motor controller driver in conjunction with a known load value? This would allow us to use to calculate the power. Need to do more thinking and research into this though.

For the motor controller driver circuit, Mark recommends a fail-safe approach - meaning that we initially use a pre-made PCB to do this in this first instance, then create our own if we have time remaining to get some more analog design experience.

As a priority, we need to bring a copy of our fan drawing to the mechanical lab near Mark’s office to discuss how we might physically build the fan. Also, we need to make a trip to the electronics lab to try and source an MG-996R servo if possible and any other components we can salvage for free. Lastly, we will need to chat to Frank on the fourth floor of RC to enquire about ordering our PIR sensors from Amazon (RS is pricey!).

MW has advised that we should schedule mentor meetings every two weeks (I need to set up a recurring Outlook meeting after confirming with the other guys what time works) and that we should meet as a group on a weekly basis as a team to go over our progress and make some brief logbook notes to record these meetings.

RW needs to get an A4 hardback logbook – RC and FO logbooks are of a satisfactory standard but should be shared with the group.

**Actions**

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| **ID** | **Action** | **Responsibility** | **Due** | **Status** |
| 1.1 | Visit mechanical workshop to get initial build ideas | All | 7/02/2024 | OPEN |
| 1.2 | Research how to measure power of DC motor | RC/FO | 7/02/2024 | OPEN |
| 1.3 | Obtain a hardback logbook | RW | 7/02/2024 | OPEN |
| 1.4 | Speak to Frank and get PIR sensors and any other necessary components ordered | All | 7/02/2024 | OPEN |
| 1.5 | Visit electrical lab to salvage free components | All | 7/02/2024 | OPEN |
| 1.6 | Investigate build structure (material choice, 3D modelling/ CAD) | FO/RW | 7/02/2024 | OPEN |
| 1.7 | Develop servo code and thoroughly test | RC/RW | 7/02/2024 | OPEN |