Team 29

Team 29 CDR Deliverables

**Team 29 Overall Deliverables:**

* Blank PCB for sensor subsystem
* ATMega328P-based sensor data aquisition
* Track the location of a moving object inside the mouse cage
* Basic User Interface for the desktop application

**Ben’s CDR Deliverable Portion**

Parts:

* Raspberry Pi
* Raspberry Pi Camera

Ben will write the code using OpenCV libraries to track a moving object inside the raspberry pi camera’s field of view. The code will determine the position of a moving object in the cage, convert it into an XY-coordinate, and send the data to the desktop application upon request.

Ben will also write code for starting and stopping data collection, including the camera, on the raspberry pi when requested by the desktop application.

**Bradley’s CDR Deliverable Portion**

Parts:

* Loadcells, Lickometer, Photobeam
* Raspberry Pi
* Arduino, ATMega328p

Bradley will convert the Arduino Uno code to run on the ATMega328P chip. This code will collect sensor data at 1kHz and send it to the raspberry pi for storage. Bradley will also assist Brock with the schematic portion of the PCB design.

**Brock’s CDR Deliverable Portion**

* Complete Altium PCB Design
* Hone website

Brock will be designing the PCB. This includes a complete schematic, footprint schematic, pcb schematic. It should have already been sent to the manufacturer and received. If time permits our PCB should have components installed.

**Paul’s CDR Deliverable Portion**

* Desktop Web Application

Paul will write the code for the front-end application that will allow users to start experiments, monitor several cages, and interact with the database. Upon start request, the data received by the raspberry pi will be stored in a local database.