WORK REPORT

Arthur
Coding

Reporting progress/work from

28th November
to
10th December

Robocon

1. Bot navigation
   - Wrote Arduino Ide code for 4 wheel concentric holonomic base motion.
   - Used direct matrix method to calculate euclidean speeds for each wheel. Did not use any pseudo matrix.
   - Code also compatible with N wheel concentric holonomic drives.
2. LSA
   - worked on the cytron lsa.
   - Wrote code to use multiple lsas in any one of 3 serial modes.
   - Wrote code to use lsa in analog mode.
3. I2C
   - Wrote several programs to facilitate basic i2c communicaton between two arduino megas.

PID

- Read about PID control and watched the MATLAB youtube playlist for further reference.
- Began Writing a program to execute PID control by refering to RoboManipal libraries.
- Code still to be completed.

ESP8266

- Worked with an ESP8266 wifi module. Apart from using it in AT command mode, no other progress was made.
- Still to be used to transmit serial data to the monitor.

Rotary Encoders

- Wrote basic code to read rotary encoder values and print clockwise or anticlockwise rotation.
- Progress is minimal. Yet to attach interrupts for better encoder value reading.

Issues Faced

The NWCH base code sometimes calculates incorrect velocites. Debugging attempts have been made but problem still persists. Will try looking at RM libraries for solution.

Cytron LSAs are giving random values when used in analog or serial mode but work fine in digital mode.