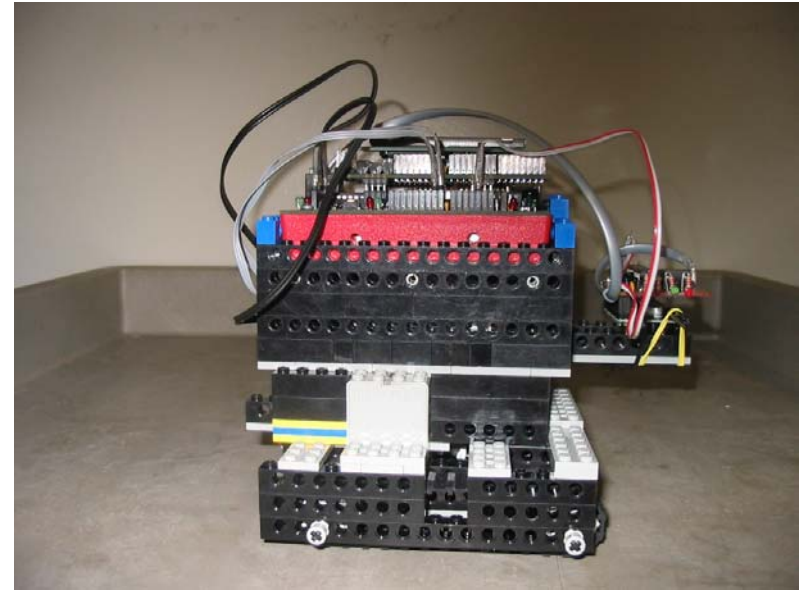# Team 2 Project 1

Jonathan Siegel

Prateek Duggal

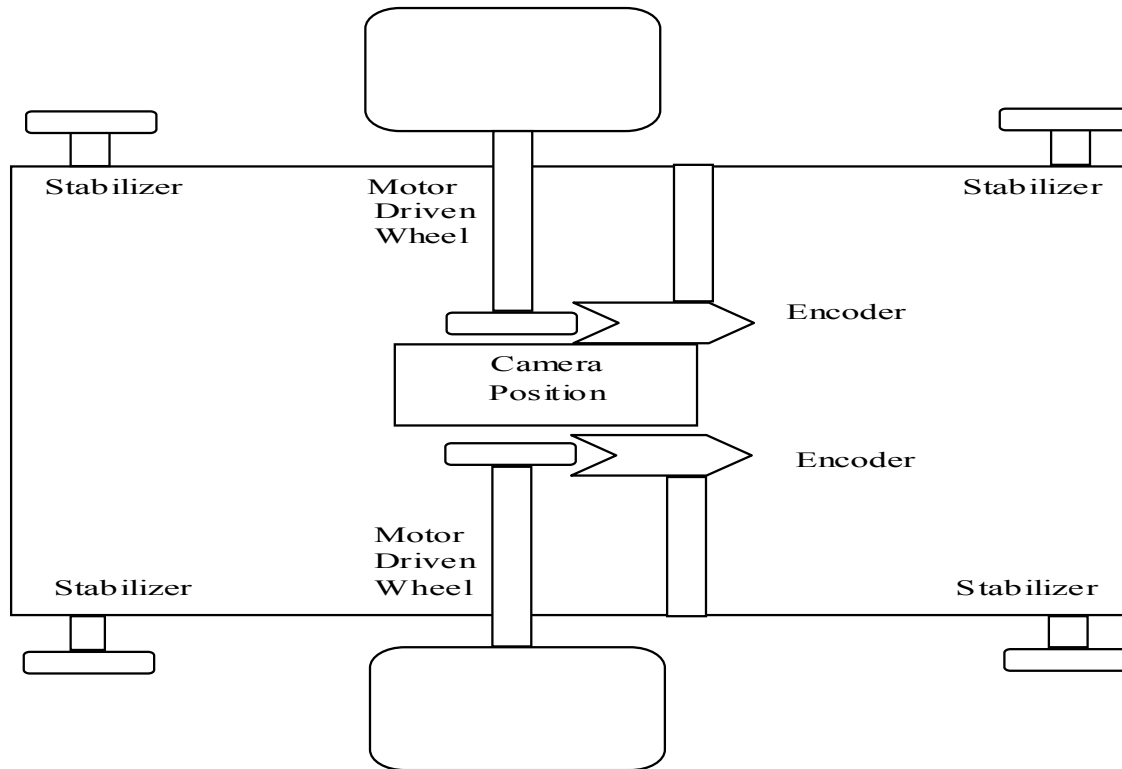Kumaresh Rajan

Team Organization

- Robot Design: Jonathan Siegel
- Integration: Prateek Duggal
- Module Programmer: Kumaresh Rajan
- Code/Design Testers: Everyone

Objective

- Color Sensing: Using the CMUCam to sense color.

- Motor Control:
  - Turning
  - Moving Straight

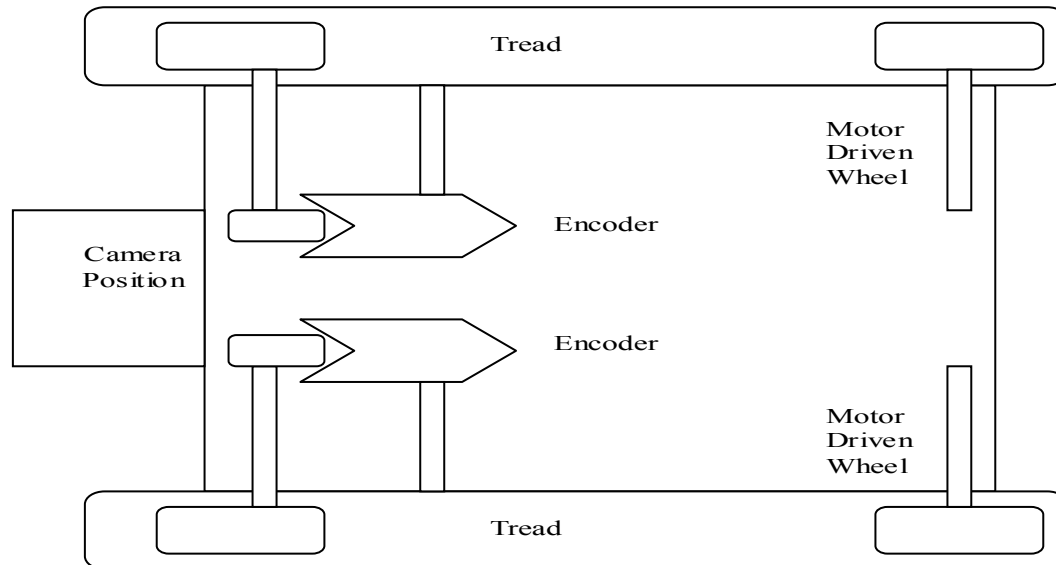# Design 1

- ## View of Undersection

Stabilizer

Motor
Driven
Wheel

Stabilizer

Encoder

Camera
Position

Encoder

Motor
Driven
Wheel

Stabilizer

Stabilizer

Design 1 Flaws

- ## No Grip on Tire

  - Tires would slip on the floor because they could not get enough traction

- ## Unpredictable Turns

  - Stabilizers mounted on each corner of our robot would interfere with the turn by causing different amounts of friction.

- ## Position of Camera

  - The camera was not able to operate because it did not have enough light.

Design 2

- View of Undersection

Design 2 Flaws

- Going straight
  - Our group is still not clear why the same motors began to behave differently. Possibly the treads made the power level difference between the left and the right motors more evident. Different wheel positions? Different wheel mountings?

- Detecting color
  - Camera was not able to detect the colors on the course. (It worked the night before).

Conclusion

- Only test the robot and make adjustments to the design/code when the HandyBoard is fully charged.
- Be in an environment that closely mimics the characteristics of the Robotics Lab.
- Integrate all code modules a week before the actual test.
- Test all sensors and motors before they are placed on the robot.
- Always keep the HandyBoard fully charged, and if possible do demo tests on the RCX.