A Sample Presentation

The following slides were assembled from several earlier presentations. They document several possible approaches to presenting.

Please structure your presentation in a logical sequence, but at the same time, feel encouraged to be creative.

The total number of slides should range between 15 and 20 max.

A good illustration, picture, or technical drawing is more informative than text alone.

You are welcome to record movies and embed them into the presentation.

Oral Presentations

Each Team prepares and presents a 10-minute Powerpoint Presentation:

- Design
- Programming
- Results

- Copy Presentation to CD-ROM
- E-mail one copy of the complete file to Dr. Mauer (mauer@me.unlv.edu) **one day before** presentation!

File Names

Use the team designation given to you,
e.g. Team #3
would use:
Team3present.ppt
Team3report.doc
Etc.

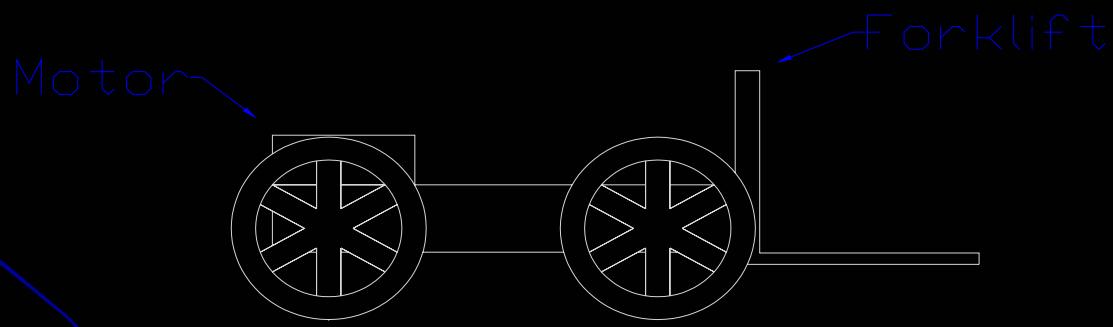
- Save on CD-ROM for classroom Presentation!
- E-mail one copy of the complete file to Dr. Mauer (mauer@me.unlv.edu) **one day before** presentation!

Introduction

- Robot must collect white eggs (worth one point each).
- Robot must avoid black eggs (subtracts 4 points each).
- Two nests in opposite corners, 18” wide by 6” long. (use is optional)

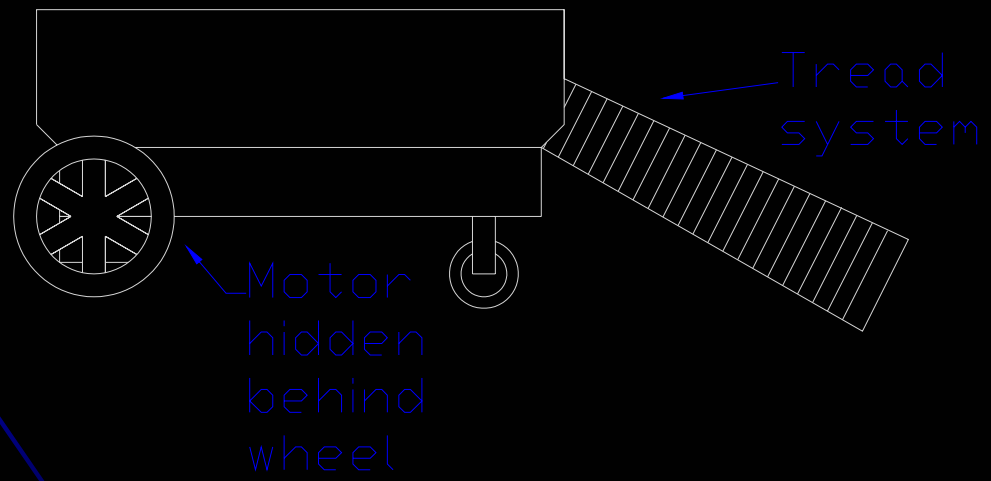
Initial Design Ideas: Gripper

- Design 1: Forklift
- Problems: Slow, hard to build.



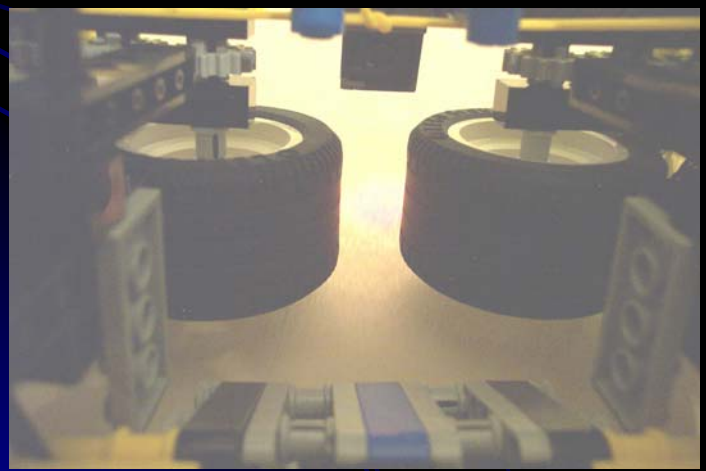
Initial Design Ideas: Gripper

- Design Idea 2: Side-by-side Track Design
- Problem: Hard to build, pushed away eggs.



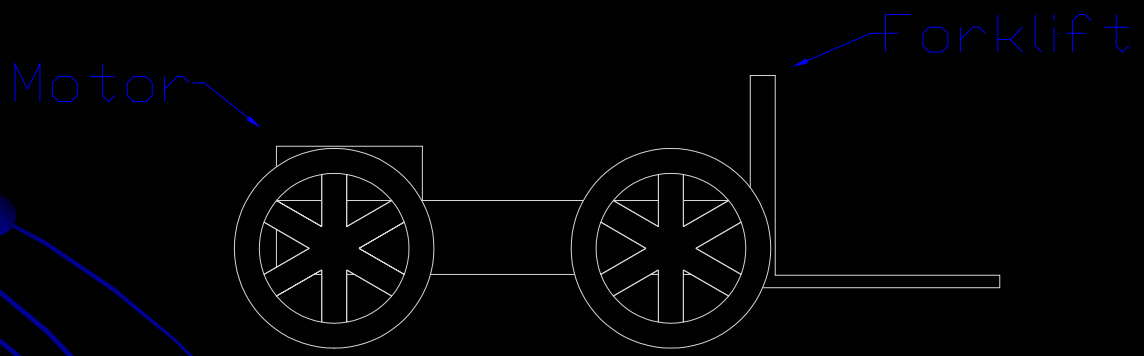
Final Design Idea: Gripper

- Final Design: Side-by-side Wheel System
- Problems: No known design flaws.



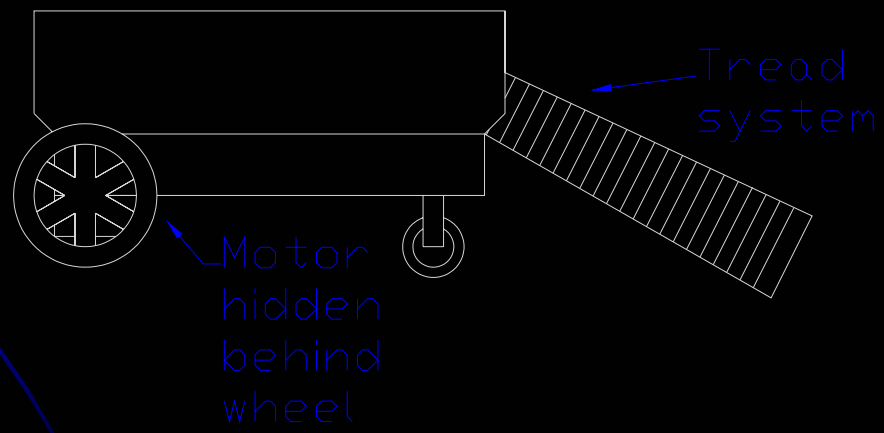
Initial Design Ideas: Chassis

- Design 1: Four large wheels, rear wheel direct drive.
- Problems: No maneuverability.



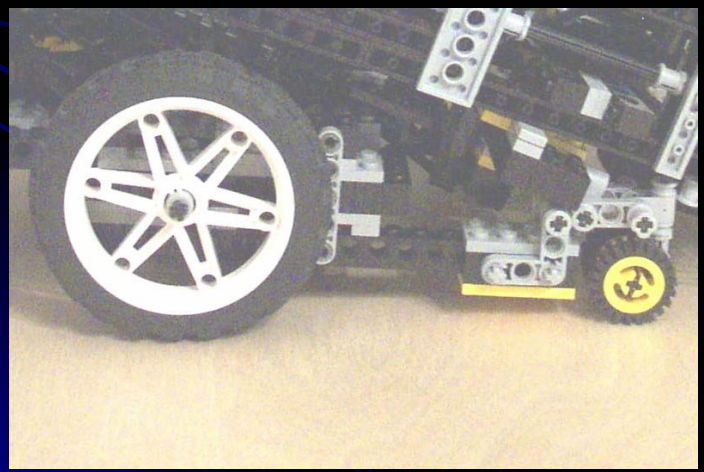
Initial Design Ideas: Chassis

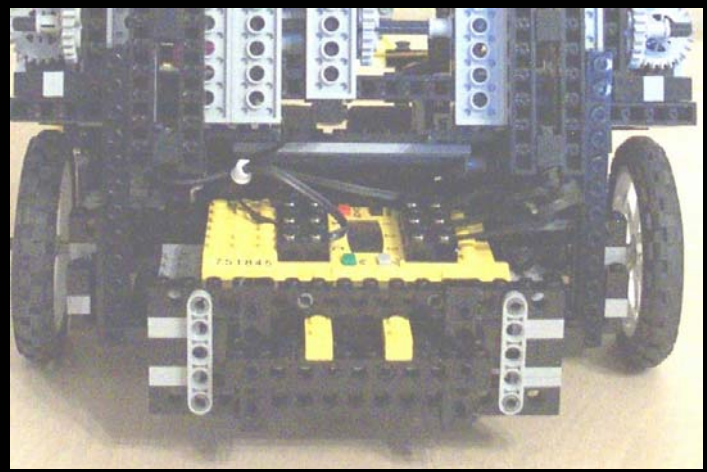
- Design 2: Simpler design, differential geared rear wheels, caster-type front wheels.
- Problems: Not large enough to support egg basket, speed control.



Final Design Idea: Chassis

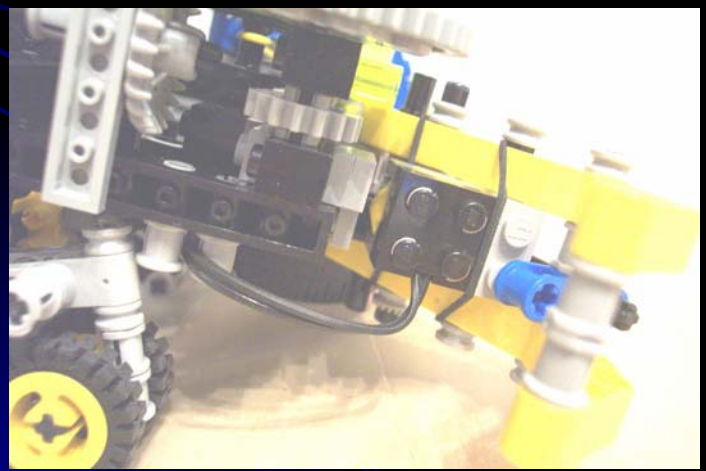
- Final Design: Large wheel base, caster-type front wheels, gear driven rear wheels, able to support egg basket.
- Problems: Pulls slightly to the right.

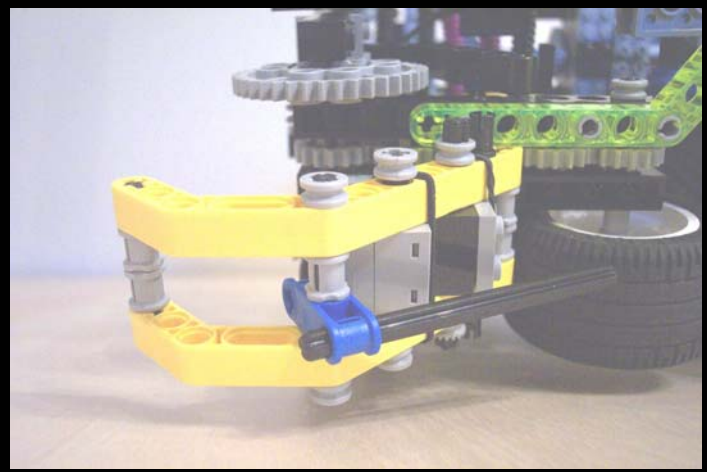




Final Design: Sensors

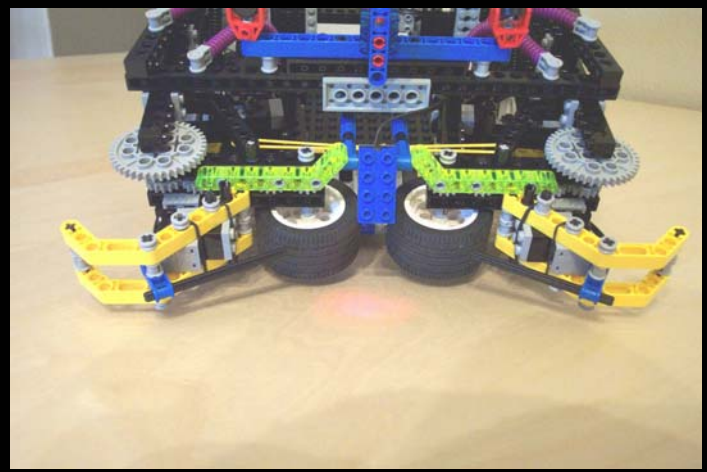
- Bump Sensors: Mounted on left and right at front of chassis.
- Problems: Clearance allows bumpers to catch on bases.





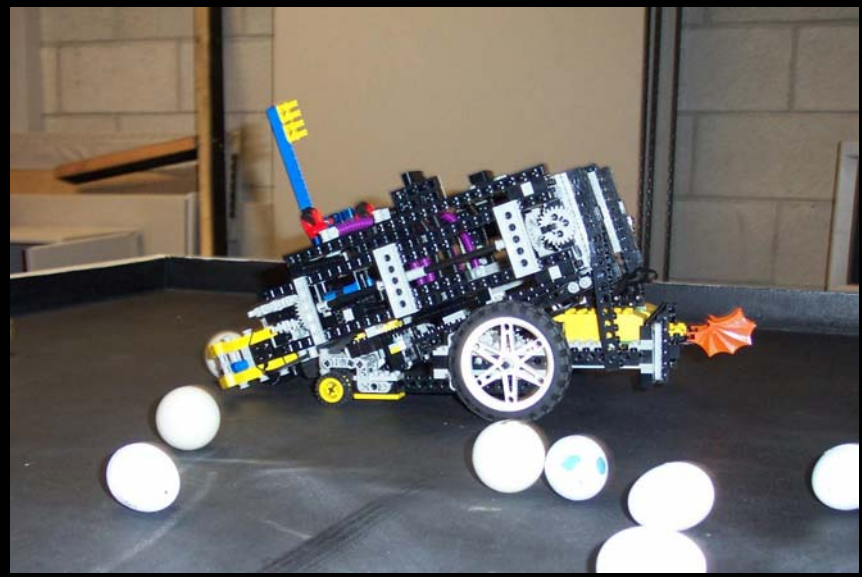
Final Design: Sensors

- Light Sensor mounted over gripper pointing toward the ground.
- Problems: Position causes programming problems.



Design Features

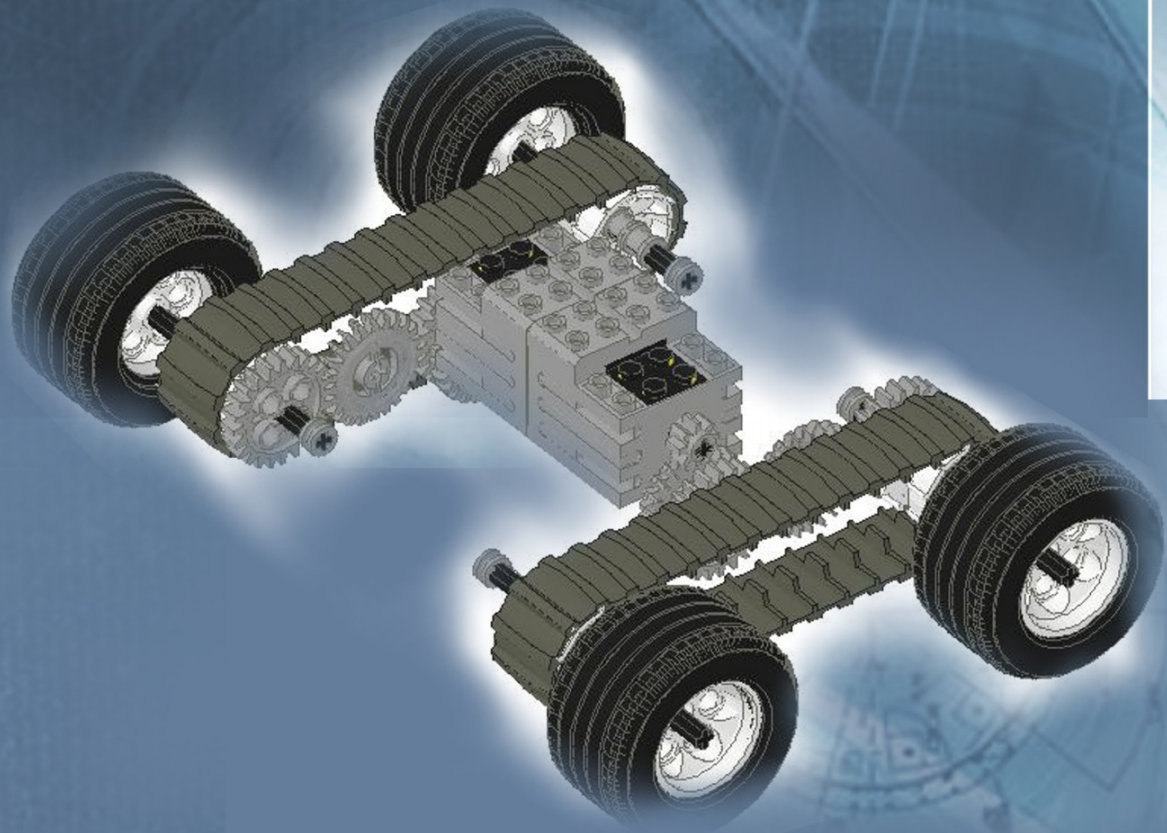
- Final Design: Wide base chassis, two, gear driven rear wheels, side-by-side wheel egg collecting system.
- Good stability, durability, steering, and speed.
- Problems: Position of light sensor caused programming issues.



features

Final Design Features

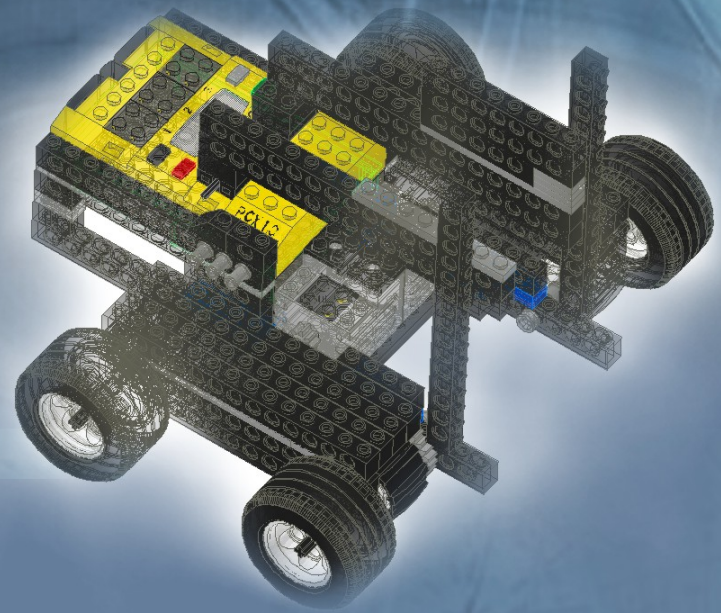
Drive train



Concept

Chassis design Selection

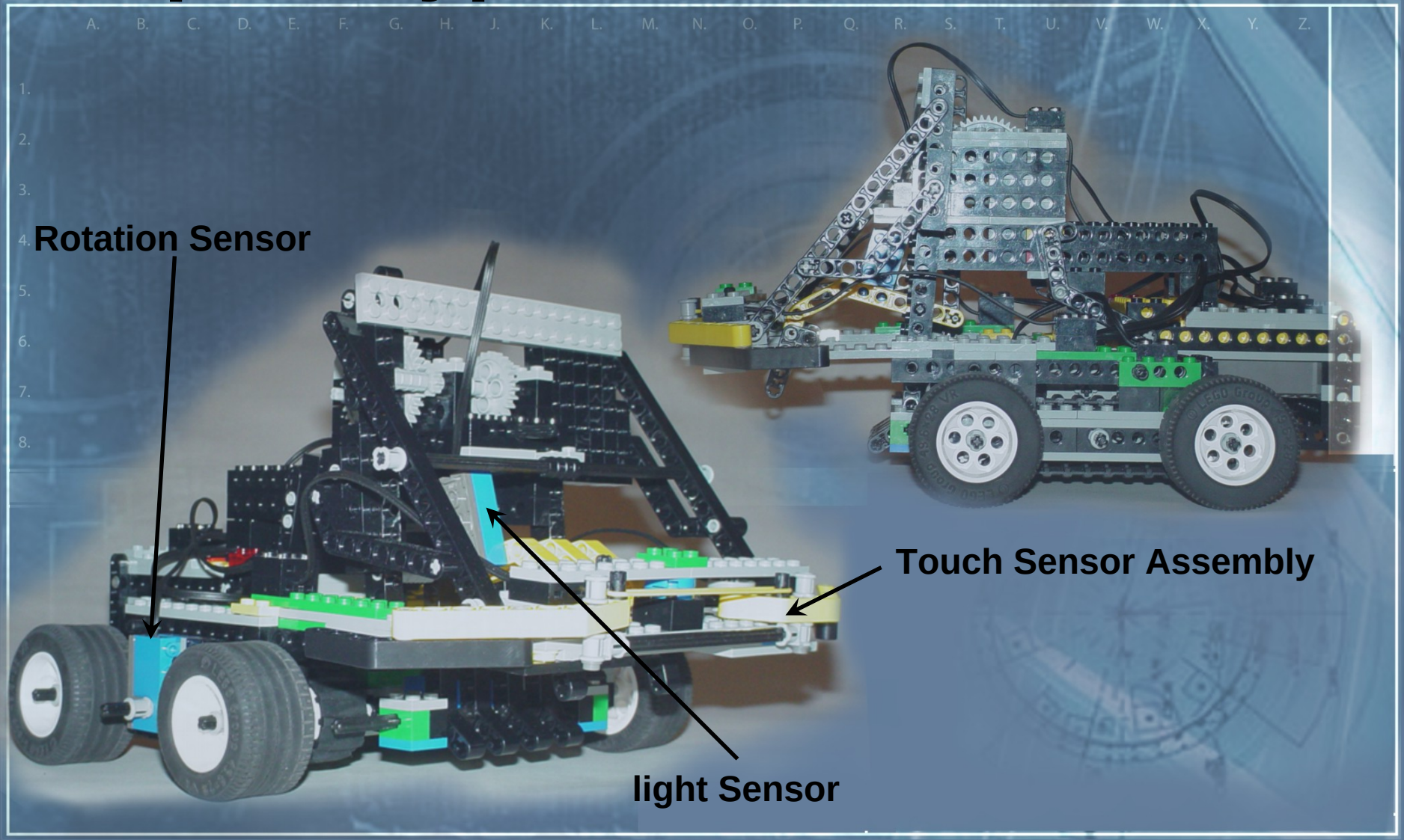
Final Design



UNIVERSITY of NEVADA LAS VEGAS
mechanical engineering department

prototype

DESIGN PROJECT: robotic dog

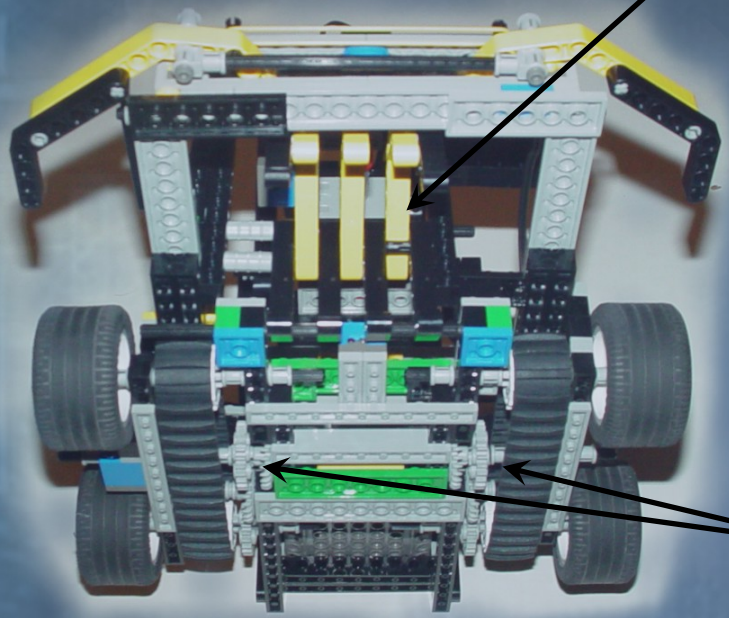


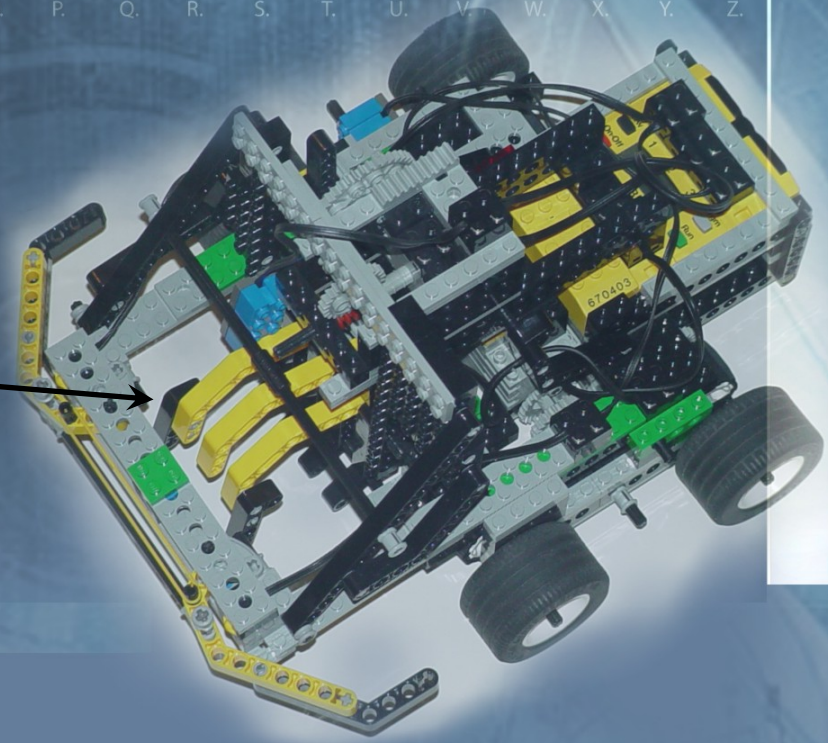
UNIVERSITY of NEVADA LAS VEGAS
mechanical engineering department

TEAM 4
Timothy beller
Trevor scott

prototype

DESIGN PROJECT: robotic dog



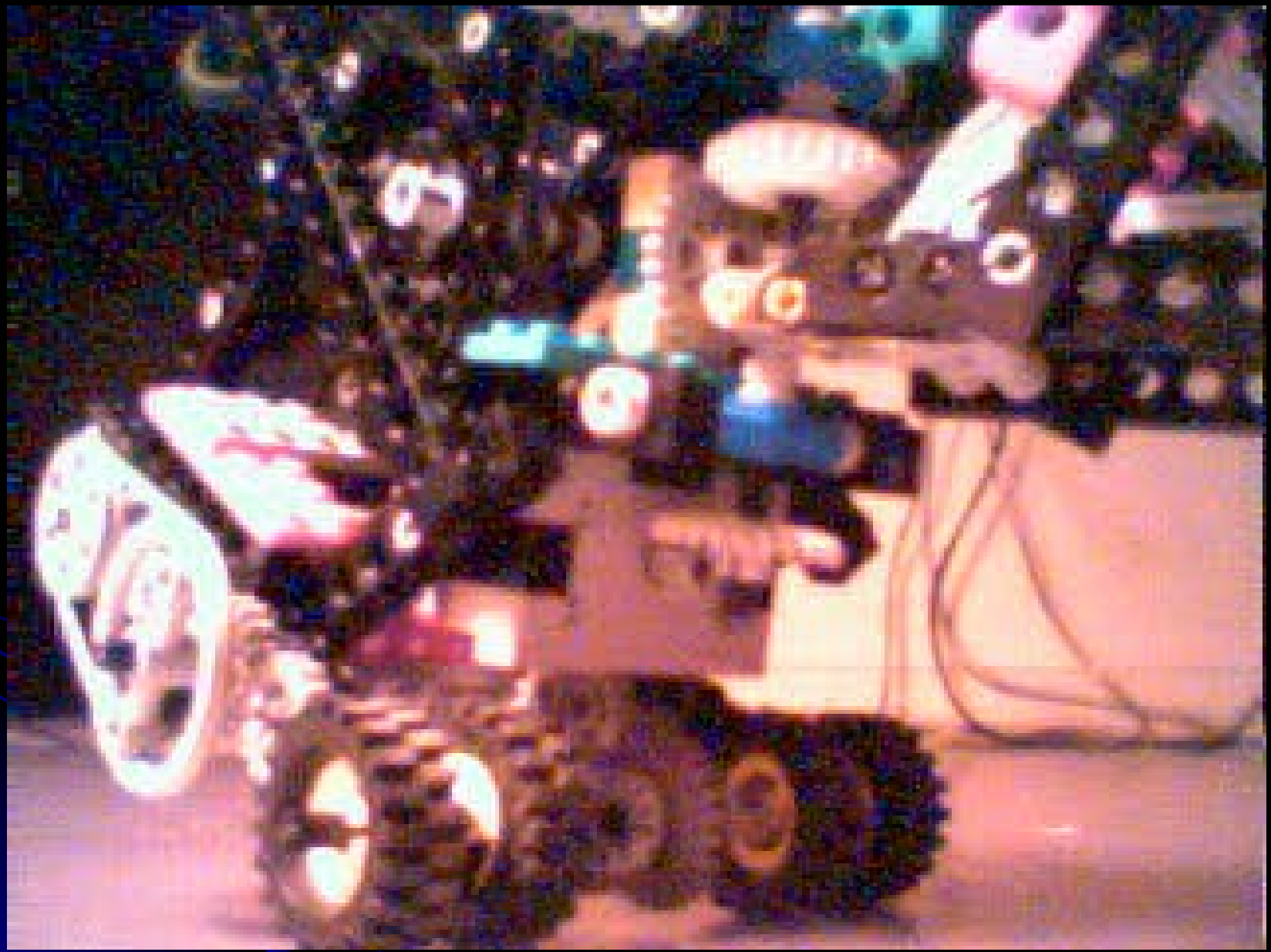


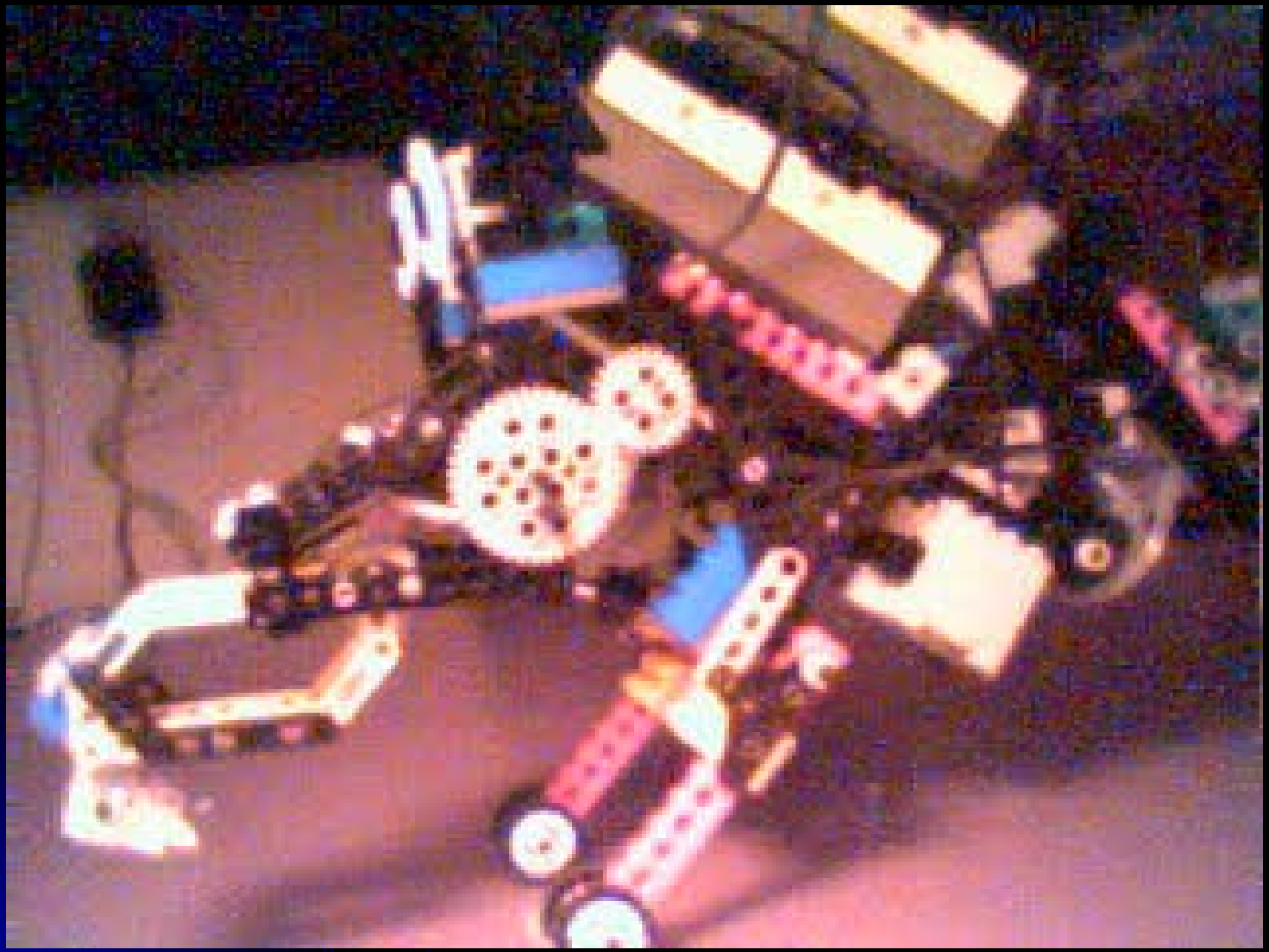
The claw

Drive train

A Closer Inspection of our Programming Design


Big Blocks
Small Blocks
Power
Sound
Comm
Variable
Set
Add
Subtract
My Blocks
Wait
Repeat
Yes or No
Sensors
DOWNLOAD
RUN
STOP
File
Edit
Settings
Help
Main Menu
hadrsys
Display Value Light3
Set counter2 to Light3
Set counter1 to Light1
Wait For 3.0 sec.
Set Direction Av
On A for 3.0 sec.
Off A (brake)
Set counter3 to Light1
Set counter4 to Light3
If Light > counter1
1
Off A (brake)
Set Direction Bv
On B for 0.3 sec.
Reverse Direction A
On A for 7.0 sec.
Set Direction Bv
On B for 0.09 sec.
Reverse Direction A
On A
If Light > counter2
3
Off A (brake)
Set Direction Bv
On B for 0.3 sec.
Set Direction Av
On A for 7.0 sec.
Reverse Direction B
On B for 0.09 sec.
Reverse Direction A
On A
If Light > counter5
2
Off A (brake)
Beep 3
Wait For 5.0 sec.
On A





Project Summary

- The design is light with good durability, speed, and maneuverability.
- In future, position of light sensor would change to obtain better readings.