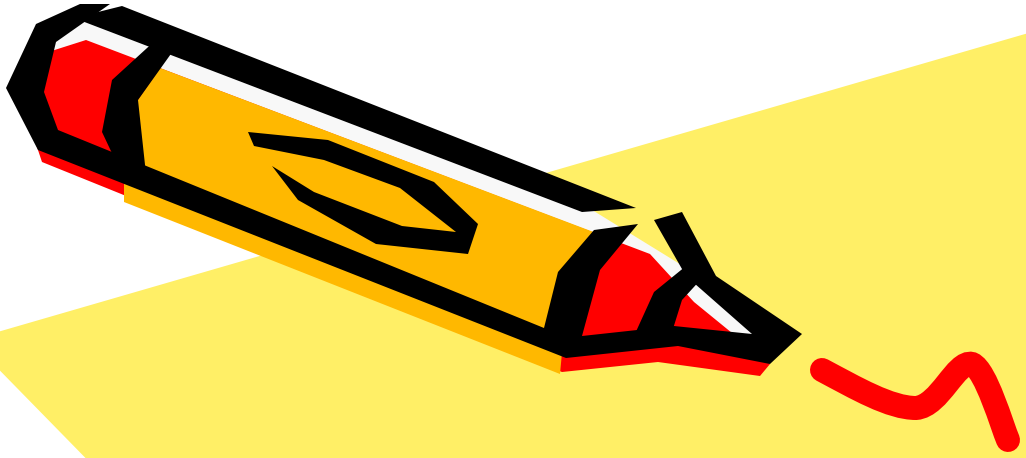
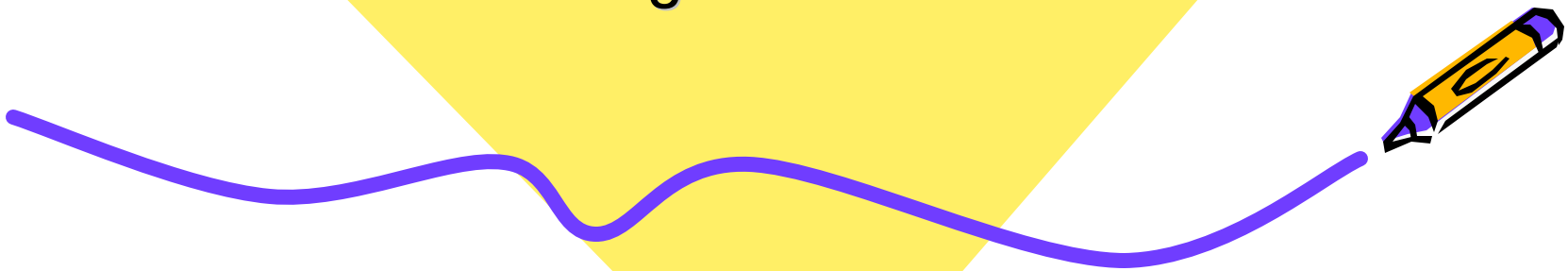


Project Tres

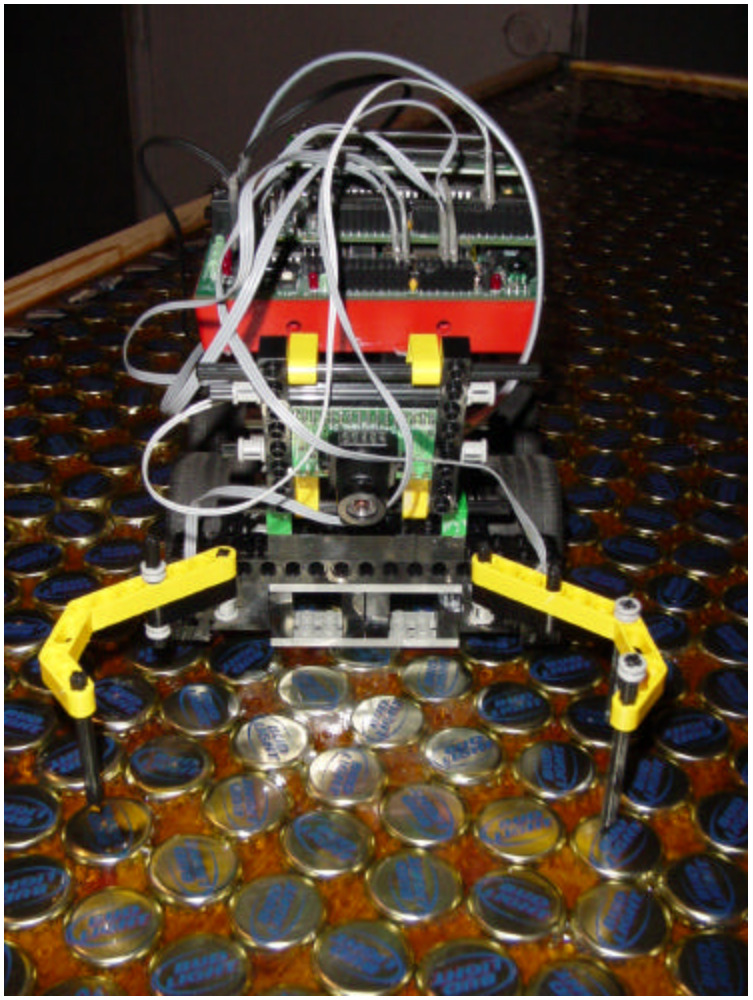
Path Planning and other stuff

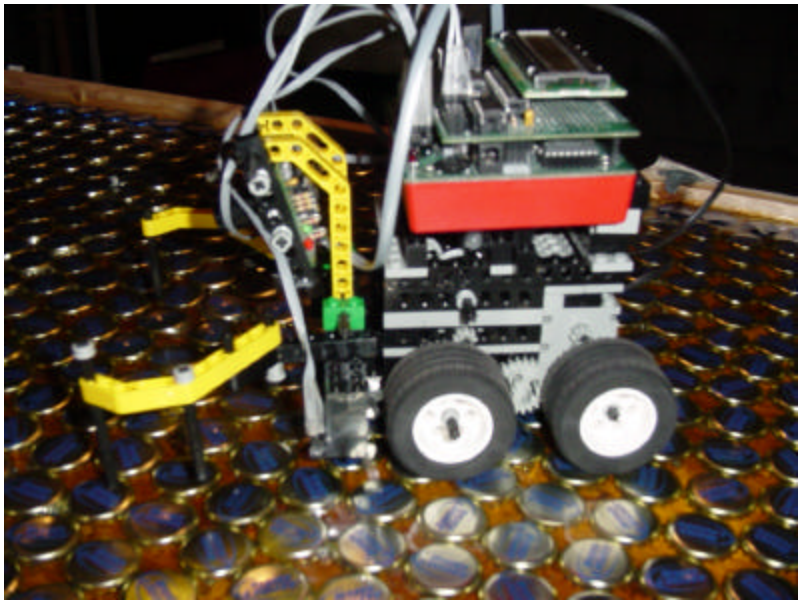


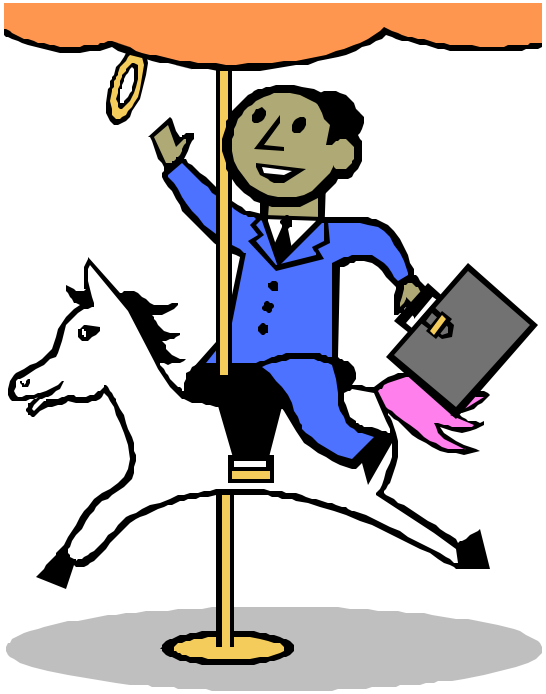
Hardware: Chassis

- Made of LEGOs
- Small footprint, about 7x7 inches
- Tall, about 10 inches
- “Static” “claws” to “grab” “targets”
- Fixed CMU Camera mount

Me next week

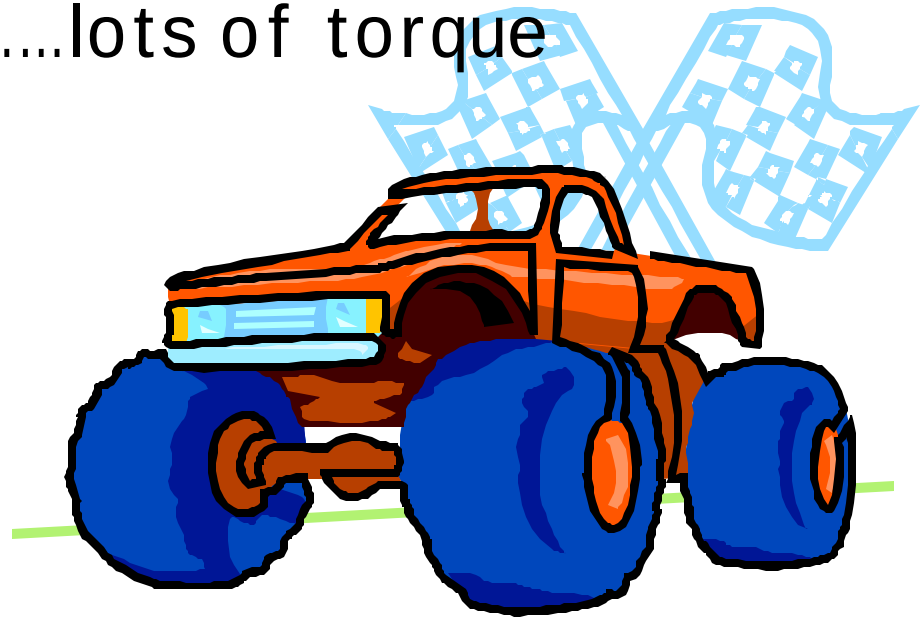


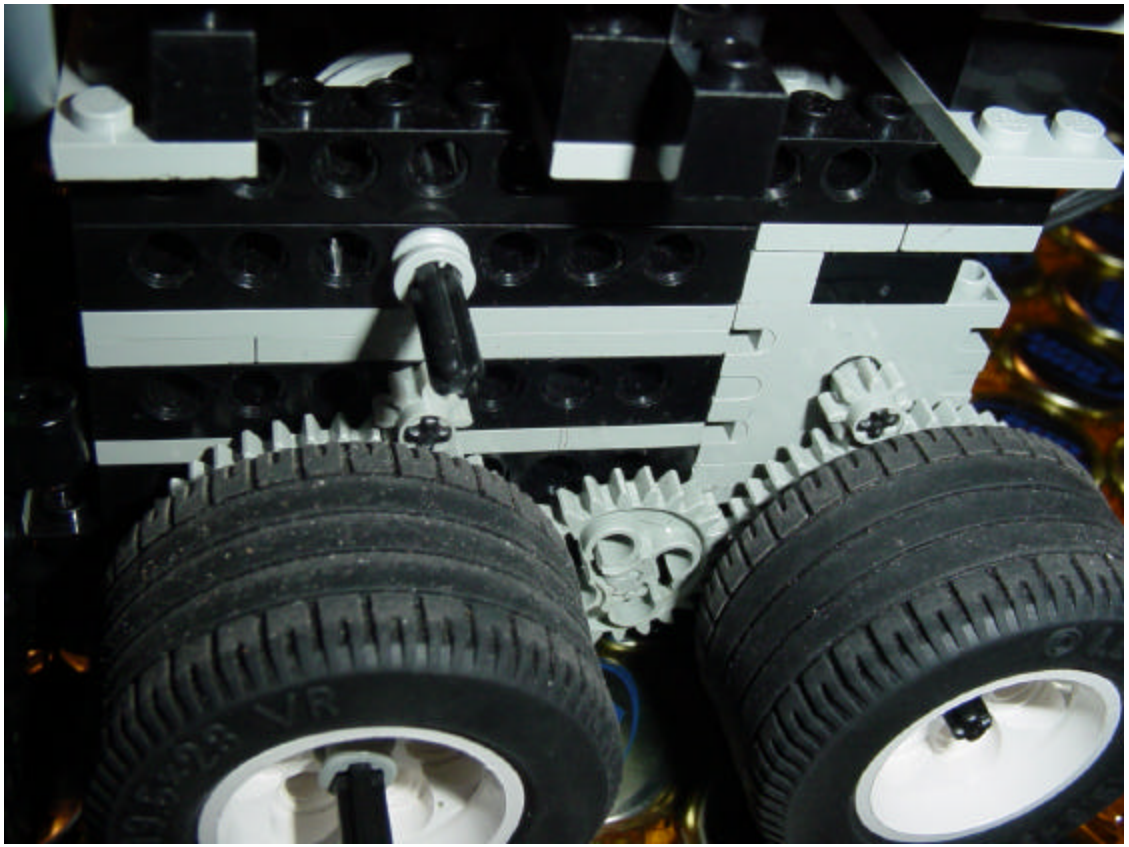


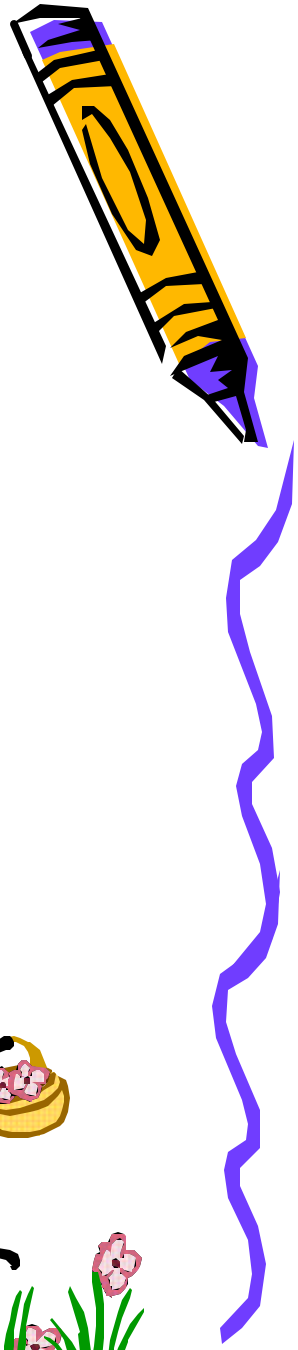


Drive Train

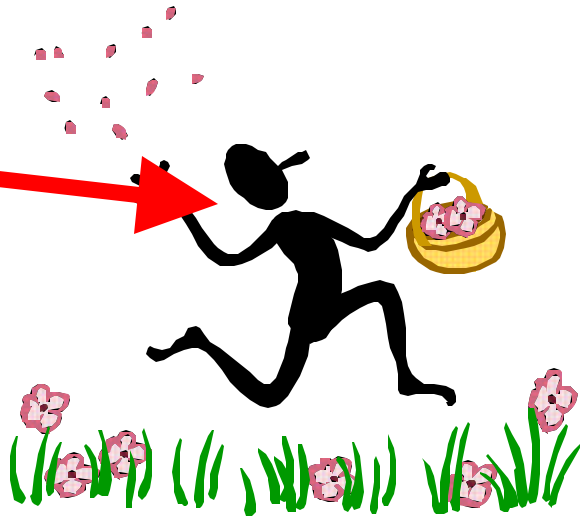
- Four wheels, fat racing tire style
- AWD
- 2 motors, one for each side
- 5:1 gear ratio……lots of torque







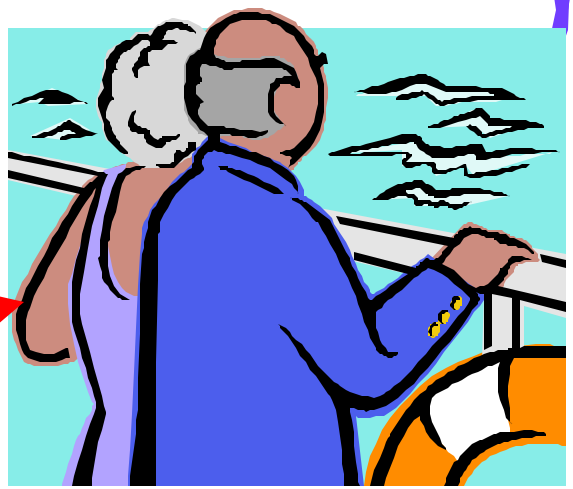
Chris

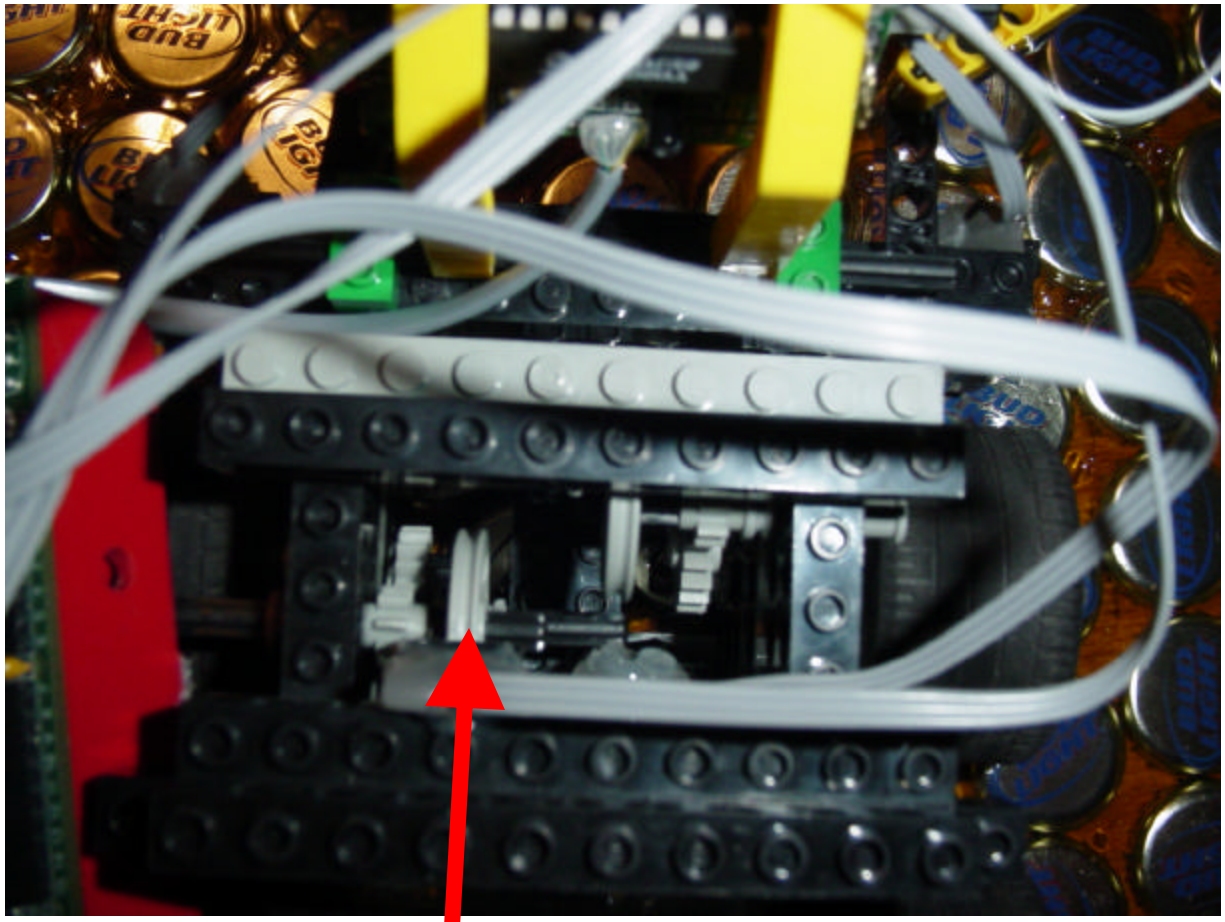


Sensors

- 2 IR sensors to detect electrical tape goals
- 2 shaft encoders
  - Insanely high encoder resolution
  - Allows us to go PERFECTLY straight
    - Didn't work though
  - Allows EXACT 90 degree turns
    - Didn't work either

Old people on a cruise





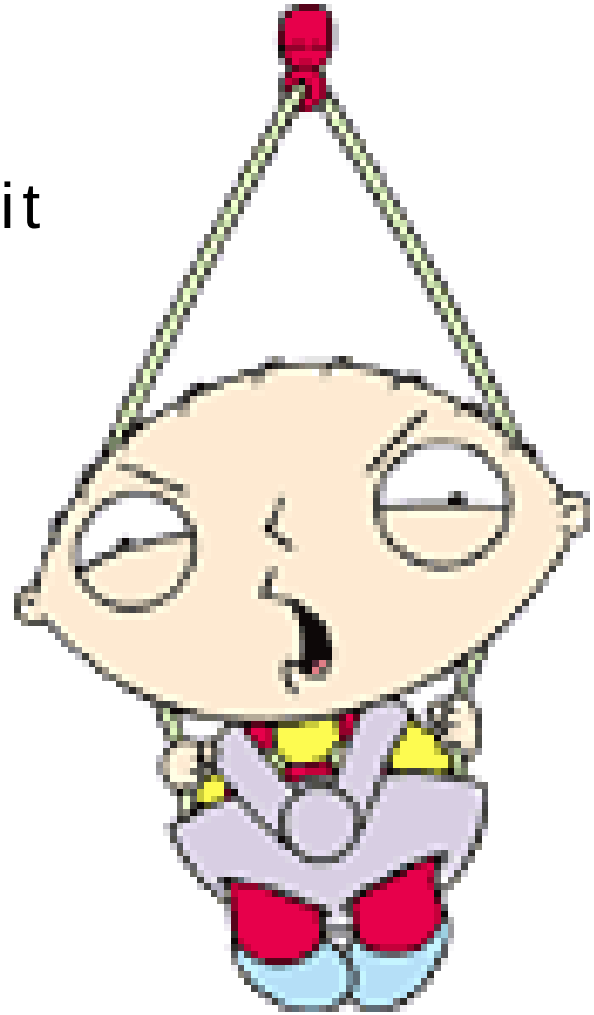
Shaft encoder

Software

- As few processes as possible
  - 2 to be exact
- Very good path planner
- Very efficient
- Accurate dead-reckoning
- Ignores Blue Robot

Software

- What Stewie should do
  - Go to closest goal to verify it
  - Grab closest target
  - Bring it back
  - Repeat



Software

- What Stewie actually did
  - Went to closest goal, verified it (YES!)
  - Went to closest target, grabbed it (YES!)
  - Spun around in circles forever (DOH!)
  - But it did get 50 points by blindly poking the Blue Robot (HA)