

To-Be-Named Capacitor Kart Project

Design Meeting #2 Notes – 7/1/2008

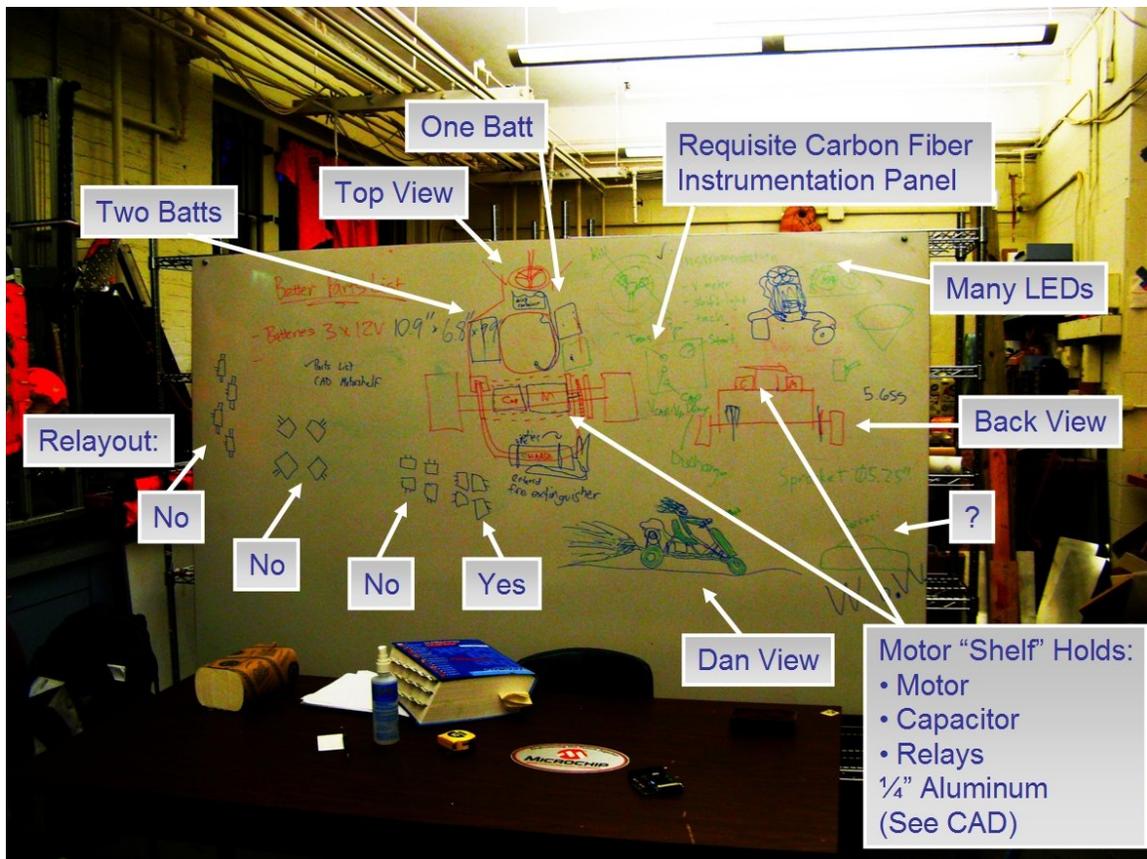
Recorded By: S.C.

New Business:

- Build Schedule: trying Tue (5-8) and Sat (10-3) starting on Sat, July 12
- All parts / raw materials will be ordered this week.
- Budget Update: approx. \$3,000 remaining before massive part orders
- Permission Slips: apparently I was supposed to do those, coming soon
- Max proposes new business casual dress code. Any seconds? No? Okay then.

Design Overview:

- The giant whiteboard, high-contrasted and explained:



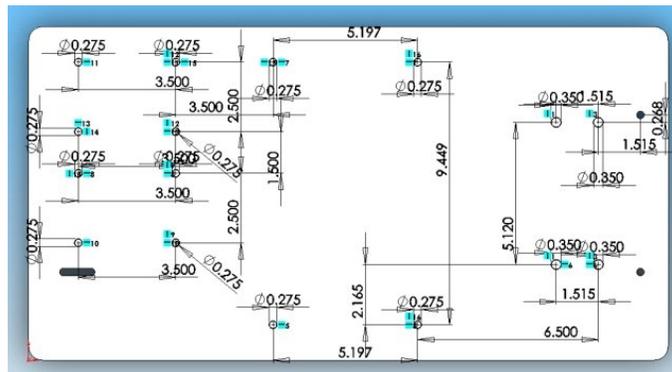
- Motor "shelf" 12"x24", can cut on waterjet here.
- Need more weight up front. Batteries as far forward as possible.

Components:

- Batteries: SeaVolt AGM, LxWxH = 10.9"x6.8"x9.9", 53lbs, 79Ah. Nice, sealed, bit pricey, but AGM can handle high discharge/charge rate and general abuse.
- Relays: 4x these: <http://www.robotmarketplace.com/products/0-SL1168.html> to switch between batteries/capacitor.
- Motor Controller: custom-built, need to make aluminum heat sinks for transistors.
- Main Controller: my thesis control box? Can drive relays and do telemetry. Sold?
- Sprockets: 12/15/18 to 54 tooth gives 4.5/3.6/3.0 ratios, #40 chain.

Motor Shelf CAD

- A fully-constrained sketch...impressive. Let's just hope the dimensions are right.

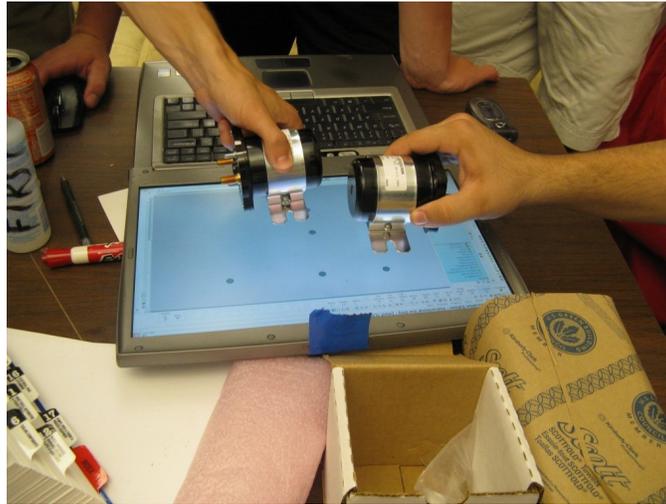


- For how many years will I get away with reusing the same 80-20 model?



- Legs allow for vertical adjustment, chain tensioning.
- And yes, it only has three legs. (Motor weight is centered over right two.)

- How to double-check you relay measurements...



Instrumentation (a lot to wire up!):

- Wheel: cap button, kill button
- Behind Wheel: switches for shifter
- Dash Panel: cap/batt voltage, speed/RPM, LEDs also for speed/RPM?
- Side Panel: start/stop button, transmission type (shift/CVT), voltage selector, regen on/off, main kill, anything else
- Pedals: potentiometers for accel, brake

Stuff for Next Meeting:

- Motor shelf built, motor/cap/relays mounted.
- Sprockets, chain done.
- Start looking at battery mounting solutions.
- Start thinking about wiring and control.