The EE and CS subteams had a meeting on Thursday. Minutes are below, with some relevant notes (section "Mechanical fixes needed") to the ME subteam.

Driving with game controller:

Used remote controller to drive robot. Just use serial control and click "connect to joystick." Make sure it's matched up to the correct robot id.

We noticed strange smell from Jayne, but from River. We couldn't isolate the problem and eventually didn't notice the problem anymore.

Shut-down problem:

At the all-team meeting we noted that a robot would sometimes shut down while driving. We thought it was because the robot was drawing too much current from the batteries when accelerating, thus causing the robots to shut down to avoid permanent damage. We planned to use firmware to limit acceleration.

However, upon further investigation, we found that one robot had this problem only when (1) the kicker board was in and (2) the black cap of the robot was screwed on. This suggests that the cap and kicker board is pushing down and causing a short circuit as the robot is moving, though we're not exactly sure where the sort circuit may be.

We noticed that the boards were wobbly. Rui suggested we hot-glue the boards in at the header pins, so that they're more stable.

More investigation is needed in order to find the exact cause and how to prevent it, and whether this problem only occurs for only that robot, or only that kicker board. EE plans on coming back to Harvard for further trials before the all-team meeting.

Mechanical fixes needed:

- 2 motors are kind of weird - one has a loose gear, the other we may have killed. Both motors are labelled
- 1 robot lacks a plunger for the kicker
- 2 robots don't have the BB set up properly

EE plans on going back on February 9th to test the driving. Is it possible to have these robots - at least the motors - fixed up by then?

Decreasing modularity of electronics:

In the long term, we may need some redesign of the boards. It was suggested to decrease modularity. The boards often don't have too many problems once properly built up, and having fewer boards would decrease the chance for boards randomly touching and short circuiting each other. We would probably hold off the design until after the 2013 competition. Some possible approaches are
- all circuitry on the motherboard
- FPGAs
- PSoC