

GEARHEADS GAZETTE



2/7/13

Volume 1, issue 3

HIGHLIGHTS OF THE WEEK:

- > COMPONENT INTEGRATION
- > CODE COMPLETION
- > BUMPER COMPLETION

The team makes crucial decision about robot design.

COULD NOT THINK OF TITLE

This build season has arguably been one of the most successful build seasons in recent memory. With finishing the chassis at three weeks in to the season and having the launcher mounted at four weeks the Gearheads are running like a stampede of steam powered giraffes. Now that the season is really winding down the Gearheads are in the testing phase, making sure that everything is working like a, well, "well oiled machine".

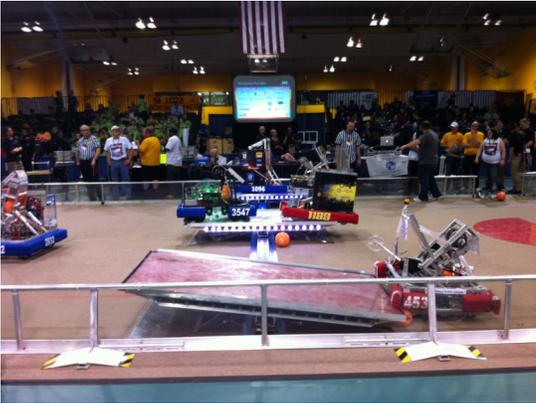
The team is also in the process of building duplicates of everything including the robot and the control board so that the team members practice all phases of robot development. This is crucial to team development. Having a team



where everyone knows how to do everything is awesome! The second robot is good for future practice and fun and also provides an opportunity to practice driving the robot so that we can choose the right driver for the competitions.

With two weeks left we will be finishing up the loader/hopper assembly and beginning to build the lifter assembly. Things are definitely looking great for the Gearheads.

FLASHBACK: GAMES OF THE PAST



Our robot balancing at last year's game "Rebound Rumble" at Wayne State.

This year's game, Ultimate Ascent is far different from the previous games. For those who don't know, this year's game breaks down like this. For the first 15 seconds the robots are in "autonomous mode" where they automatically shoot Frisbees into holes in the wall. After that

for the next two minutes the robots are in "teleop mode" where they are driven manually, doing the same task. In the final moments the robots can pull onto bars to lift themselves off the ground to score their team points.

In last year's game the robots were tasked to shoot basket balls into hoops, not unlike the Frisbees, but instead of lifting the robot off the ground with sheer mechanics and power, they rolled onto a bridge and balance with other robots to score more points.

Two years ago, the robots

were tasked to pick up and place inflatable shapes on a peg board wall designed to create the FIRST logo. In the last 30 seconds of the match the robots launched their mini-bots to climb up one of the four poles on the field. This made the whole challenge more difficult. We are excited to see what other teams come up with to play the game. Whatever they come up with, it'll be interesting and I'm sure that you'll want to see it; so don't miss out on getting to see the excitement of the 2013 first robotics competition.

SO MUCH TO DO, AND JUST ENOUGH TIME!

By: Easton Washburn

This year, the Gearheads have turned a new leaf: we had properly prepared, we had organized ourselves, and we had established our team as a family-type unit. And now all the work put into the team in pre-season has paid off in the form of a nearly-finished robot in the 5th week!

The shooter is on the chassis, the control board is assembled and at-

tached, the coding is done and the bumpers are built, sewn and mounted. The only tasks left to complete the feeding ramp for the shooter. We have ample time to finish the robot, and we can test drive the chassis while that work is being done.

Having most of the work done by week 5 alleviates a lot of the pressure that we have felt in past years. In previous seasons, we've had to

rush to finish our robot within the final week, and we hadn't quite made deadline. Our robots, then, were not as successful. The deadline imposed by FIRST is a hard deadline with no work allowed after that day!

This year we can improve our robot while still in the end of build season, giving us a higher chance of a higher performance. We can only go upward from here!

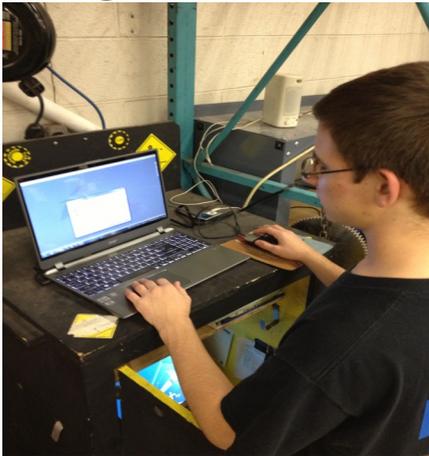
Robo-trinity: A Progress Report

Controls:



The controls group now has the code for the robot nearly entirely finished! Their newest project has been to construct the finalized control board for the robot, and their only task now is to finish putting Jaguars (motor speed controllers) in for each of our shooter and drive motors.

Design:



The design group this week is doing physical work on the bumpers. They're working on the frame and covers for the bumpers, and are nearly done. The bumper design this year is completely different from previous years, as it is now in four parts, placed on only the corners of the chassis for ease of attachment and transport.

Build:



Build has been working on the feeder for the shooter, and their most recent addition is a cylindrical storage tower for our four discs. This, in changing from the original cardboard to a metal version, has caused a few setbacks, but work is being done to fix the bugs in the system and get the shooter working at optimum capacity.

1189 Gearhead's sponsors

