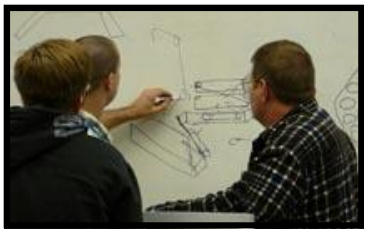
TALON 540
Mills E. Godwin High School

Week 1 Newsletter

January 10, 2009 Volume 2, Issue 6

Team members watching other team's prototype videos online.



Mentors help the team prototype the design.

During kickoff weekend, a great part of the time was spent on strategy discussion. This year's game, Lunacy, is very much strategy-based: robot design is dependent on how the team wants to play the game. There are many aspects of the game in which to focus on. Different ideas of robot design include building a machine to either shoot, dump, or herd the game pieces around the playing field. Each of these designs suits a different game strategy. Thus, strategy and design are essentially connected; each influences the other.

Because of this characteristic of the game, TALON 540 has been developing different robot designs based on different strategies. During this first week of build season, the team has been narrowing down the different robot designs. After discussion among team members and consultation with mentors, a couple of prototype designs have been presented. Nearing the end of this week, all efforts were put into drawing up the design in CAD. Once the CAD for the prototype is finished, actual building will commence.

At the end of week one, TALON 540 has come up with two prototype designs that can collect game pieces, hold them, and shoot or dump them; the robot will use various conveyer belts to do so. A concept central to the development of this idea has been versatility. This upcoming weekend, the team plans to start prototyping various parts of the designs.

Continued on page 2.

Table of Contents

Week One Overview: Continued from page 1

A lot of work has been put into deciding the strategy for the robot, which influenced the design. Effort will now go into another part of the game strategy: the plan for the human players. The game has a high level of human player involvement; what the people do and how they decide to play the game must be compatible with what the robot is doing. Developing a plan for this part of the game is also a goal for the team.

In addition to design and strategy development, other technical aspects of building a robot must be addressed. During week one, the programming team has began to investigate the use of a camera in order to direct the robot's movements. Work on understanding and programming the camera will continue into next week.

The help of the mentors and alumni has been invaluable to the team during this week and certainly throughout all of build season. Expertise has been especially helpful in the early stages of designing and planning: before building, all input into what designs would work and which ones would not. Also, the game is still new to the team members; different perspectives of the game and how to play it were brought up during discussion helped team members to expand their ways of thinking.

Members brainstorming designs for the hopper.

Programmers looking at previous bots for ideas.

Mr. Hurlburt
Lead Mentor

This year I seem to be taking an even more active role during the design process since the game is so different. I have enjoyed seeing the kids start to "get it". My role as the lead mentor, having a Technology Education background, is to show the students how the design process works. This year is a classic example of how using the design process will help with designing the robot. We have had some ups and downs during this process. The students are learning the valuable skills that they can use in the real world someday. I am excited to see them learn, work and come together as a team to design, prototype and build a competitive robot. I hope that we can lock down a final design within the week so we can start building as soon as possible. We have made a lot of progress with the lower frame design. When we finalize the upper frame we will be on our way to finishing our robot. I can not wait to see what next week will bring to this team. I look forward to the final product.

Mrs. Holley
Assistant Mentor

This week in Public Relations, our staff gained a few members and we recruited temporary members to complete the web site. We have added many new items to our new site and hope you will be as excited as we are about our final product.

Our new addition to our PR Staff is for our newsletters. Aditya Mothodoka is our new Lead and his assistant for Outreach is Ryan Law. As our staff continues to grow, we will have the ability to accomplish many additional projects to represent our team. Carolyn Song, along with other members as needed, has worked hard taking the many pictures that are needed for documenting our activities. I am looking forward as I continue with the Public Relations team.

A Look at Week One from the Students

Brock Davis, Ryan Abalos

Design Leads

The first week of build season has gone quite well for us. Once I got back from VCU on Saturday, we broke into groups and began discussing strategies. My group decided that we would attempt to make it across the field during autonomous in order to begin getting empty cells at the beginning of the tele-operated period, perform offensively during the tele-operated, and perform defensively during the bonus period while super cells are being thrown in. We presented this strategy to the team. On Sunday, we spent a couple minutes as a whole team where we decided that we have to come up with a design before we can finalize a strategy. We broke into design groups and began the tedious process of proposing ideas, dimensioning, and preliminary CAD-ing. We presented our ideas to the team, and we decided to go with the idea proposed by Scott's group. On Monday and Tuesday we worked out problems with the design, and on Wednesday we finalized a hopper system within dimensions. We hope to begin prototyping certain design elements this week so that we will be ready to build soon.

Members of design team working on the frame design.

Mentors and Leads prototyping the different designs.

January 10, 17, 24, 31; February 7, 14: Saturday build days

Saturdays are TALON 540's full work days. Team members will work with mentors on the robot.

February 17: Ship day

This will be when the robot needs to be sent to the regional competition at VCU. Essentially, this will be the last build day for the teams.

March 19-21: NASA/VCU Siegel Center FRC Regional

TALON 540 will be attending the local regional here in Richmond. The three days of competition include two days of practice and qualifying rounds and one final day of elimination rounds.

Robot logo designed by Alex Hill