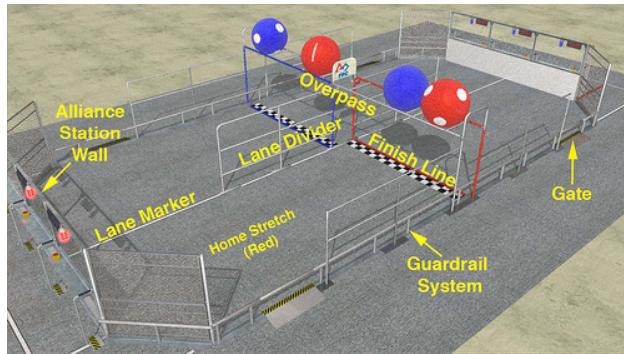


First Robotics: This Year's Team is Off to a Good Start!

Submitted by: Kim O'Toole Eckhardt, Lead Systems Engineer

The Harris/Penfield FIRST Robotics team, Rolling Thunder, is already more than halfway through its build season now. Given only six weeks to design and build a 120lb, 28"x38"x60" robot, with cost restrictions and many other rules, the team has moved along well this year.

This year's game, called FIRST Overdrive, places six robots on the field in a three against three configuration, racing around a track to score points. They can also maneuver large 40" trackballs by pushing them across finish lines or hurdling them over the 6.5 foot overpass to get additional points. There is also a mode for the programmers to have fun – the first 15 seconds of the game is called "Hybrid Period." During this time, robots can only respond to four distinct commands from a "Robocoach" using an IR or other type of remote. Because there are only four commands, many of the robots actions need to be performed autonomously.

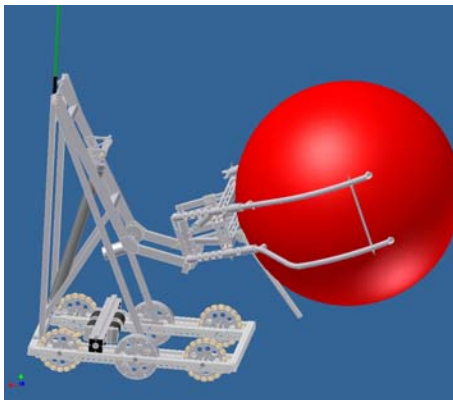


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This year's team of 25 mentors and 40 students decided to take on the challenge of hurdling the 7.3lb ball over the overpass, as well as having a speedy drivetrain! The drivetrain is complete and has been tested at nearly 13.4feet/sec, and the mechanical teams just finished the designs for an arm with a large gripper that can drop the ball over the overpass. The arm and gripper are driven by pneumatics, and the wrist is driven by a van door motor from the kit of parts.



The drivetrain runs on four high torque CIM motors, and has two traction and four omni wheels for high maneuverability.



The team has only a few weeks remaining and must ship the robot on February 19, to the storage site for the initial competition. They are busy getting parts made and assembling the robot to be able to hand off to the programmers and drive team for the last week of integration! **A huge thanks to the Harris model shop and all of the Harris mentors for all of their time and efforts through this build season!**

The team will compete March 7 and 8 at RIT for the Finger Lakes Regional. Come check out the action or volunteer if you have the time! They will then compete March 27-29, at the Philadelphia Regional, and then fly off to Atlanta for the championship competition April 17-19.



Larry Lewis helps senior Austin make parts for the robot drivetrain.



Tony DalSanto and Dave Burlone help electrical students learn about relays.



Josh Gannon & Amy Gontarek talk with students Rika and Dan about the mechanical designs.



Martin, a junior at PHS, uses the Robotics team's all in one to mill out a part.



Dave Burlone helps student Josh make the electronics tray.



Rika times this year's robot drive train in speed trials.