

THE NUTS AND BOLTS

TECHHOUNDS TEAM 868

Upcoming Events:

Boilermaker Regional
March 14-16th

The TechHOUNDS first competition, the Boilermaker Regional, will take place at Purdue. Team members, friends, family, and sponsors are all welcome to watch the match and cheer on the team.

Crossroads Regional
April 4-6th

The team will compete in its second regional of the season, the Crossroads Regional, hosted by Rose Hulman university in Terre Haute.



February 12, 2013

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Open House 2013

Parents and sponsors have the opportunity see the team's hard work in action

On Monday, February 18, all parents, sponsors, and team members are invited to the annual TechHOUNDS open house to see the team's hard work in action. The team will set up the field in the front commons of Carmel High School and the completed robot will be on the court and shooting Frisbees.

Before the robot demonstration, visitors will receive a tour of the entire industrial technology department and learn about how the robot came together over the six-week season.

Parents can also learn about future competitions and receive information about how students can travel and attend regionals.

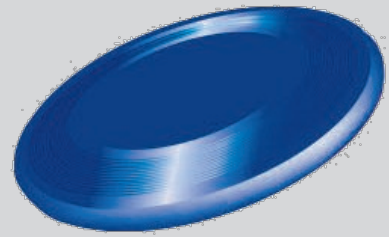
The TechHOUNDS open house has

been a tradition for many years on the team. It started as a way for parents to see what their students have created and get a real-life experience of being a member of a robotics team. Sponsors are invited to see how their generous support has come to be used by the team. Anyone interested is encouraged to join the event and become part of a classic TechHOUND tradition.



Last year's student team leader shows off the 2012 robot during last winter's open house.

The Game Plan



With the build season over, the team has finally built a robot that is ready to dominate the competition. The robot has strengths and skills for every section of the game.

The game will begin with a 30 second autonomous period where the robot must function on programming alone without a human operator. In this

“This is the fastest robot we’ve ever had on this team.”

George Giltner
Faculty Team Lead

period, the robot will detect the goals on the field through a camera and shoot pre-loaded frisbees from up to eighteen feet away.

For the tele-operated period, where the robot will be controlled by human drivers, the robot will collect frisbees by being hand-loaded by human players. Once the frisbees are collected, the robot will be able to shoot frisbees over 75 feet. The frisbee shooter will be able to adjust 10 to 15 degrees, and the speed at which the frisbees are shot will be adjusted to fire at goals of different heights.

The robot’s strongest asset this year is its speed. To control the speed of the robot, the team has incorporated a West Coast Drive transmission that will allow the robot to quickly shift from low to high gears.

The team has also incorporated an “anti-gravity” low-friction plastic that will allow the frisbee to slide into the shooter quickly.

The team is also working on an “arm” that will climb the tower on



The team tests the shooting mechanism of the robot in the senior hallway of Carmel High School

the center of the field for 10 points at the end of every match.

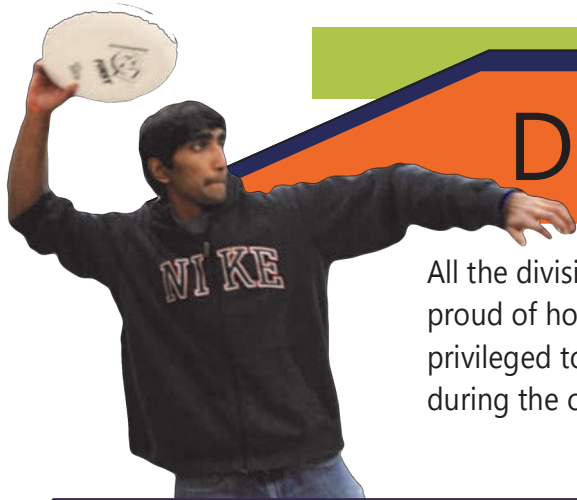
With these key elements of the robot that incorporate speed, fast gears, and power, the team has high hopes for success in Ultimate Ascent. The team is looking forward to competing in the regionals and nationals and becoming champions of the 2013 game.

Robot Highlights

- West Coast Drive Train
- “Zero gravity” plastic
- Speed: 15ft/sec
- Launches 4 Frisbees/sec



Members test out the climbing mechanism of the robot which will be used for the end game



Division Updates

All the divisions have been working diligently throughout the build season. I am proud of how dedicated all the team members have been this year. We are very privileged to end the year with such a dynamic group, and I know we'll do well during the competitions.

- Akash Shankar (Student Team Lead)

Auxiliary Construction

Construction finished building a new battery box which has a retractable door that provides easy access to the robot's batteries. The division is now practicing assembling and disassembling the pit, the place where the team will work on the robot in between matches.

- Blake Loncharich (Division Lead)

Animation

Animation is finalizing the intro to the TechHOUNDS promotional animation video. With the robot complete, the division is creating an animation of all the robot's components to demonstrate how it functions in real life.

- Alyssa Dash (Division Lead)

Robot Operations

Robot Ops has finalized the shooter and the drive train. We're getting the entire robot put together and we're practicing shooting and coordinating with programming to get the robot ready for competition.

- Evan Chivington (Division Lead)

Programming/ Electrical

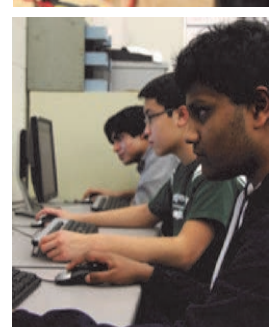
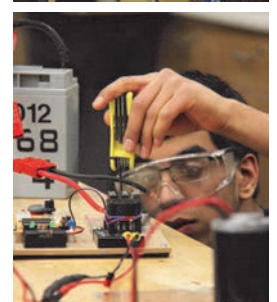
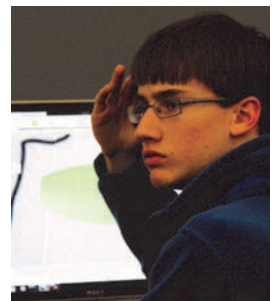
Programming has continued work on the auto-targeting camera code that will help the robot locate the goals during the autonomous period. We are now putting together the wiring and coding for the final design of the robot.

- Jacob Sweizy/John Du (Division Leads)

Website

The website has a new front page design as well as an updated member-bio page with photos of all the members. The web team has worked hard this build season to give the page a new, polished look.

- Vincent Mai and Ashwin Sunderaj (Division Leads)



Rookie Corner



Tiger Huang

Grade: Freshman
College: Purdue or MIT
Favorite Class: Digital
Electronics
Inspiration: Father

What Division are you in and why?

I joined programming and electrical because I like building circuits and knowing how electronics work. My father got me into programming in fifth grade.

How do you think TechHOUNDS will impact your colleges/career?

The team gives me programming experience with a team and not just by myself, which is useful for the real world and working with a company or business.

What has been your favorite part of the season?

The best part has been the feeling I get when I know I've contributed something important to the team, like how I helped with writing the transmission code.

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