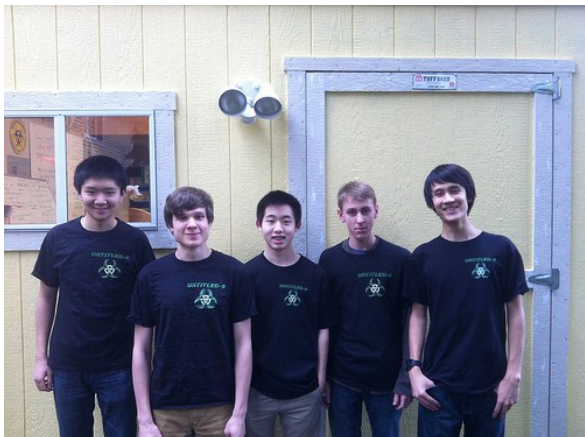


THE TEAM



Untitled-8 Robotics Team

TEAM BRAINSTORMING

Before ideas can take form, they usually require discussion to pool all the options. Before we ever build anything, we brainstorm as a team or as subgroups. We often use a "Brainstorming Board". This helps to efficiently clarify concepts and all team members can contribute.



THE CHALLENGE

The object of the game is to score more points than our opponent's alliance by scoring more rings, lifting our alliance robot higher, and getting more tic-tac-toe arrangements than our opponents.

The Game:

There are a total of 24 rings available to each team as scoring objects in the game. In the center of the field there is a 3x3 double sided grid of pegs with an infrared sensor on the middle row. During autonomous, the robot tries to score its autonomous ring on the column with the infrared sensor, which is randomly placed on any column. During the driver-controlled period, the robot will grab 2 rings



at a time, try to score as many rings, and complete as many 3-in-a-row arrangements as possible.

The final thirty (30) seconds of the Driver Controlled Period is called the End Game. One robot from each Alliance is challenged to lift their respective alliance robots as high as possible, resulting in more points.

<http://www.usfirst.org/roboticsprograms/ftc/>

UNTITLED-8

Team 3515



<http://untitled8.org/>

FTC— FIRST Tech Challenge
Advanced Robotics Team



FTC
FIRST Tech Challenge



Lakeridge High School
Lake Oswego, OR

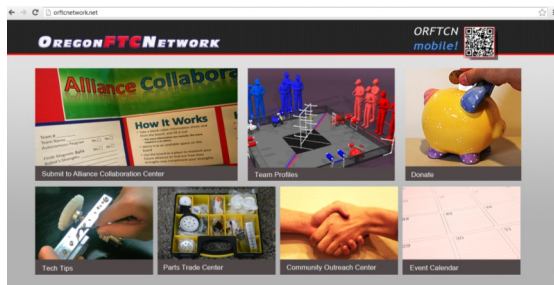
The rapidly growing popularity of First Tech Challenge (FTC) Robotics has resulted in needs to help foster the growth of this fantastic academic sport. The goals of Oregon FTC Network are to help give back and grow with the needs of the Oregon statewide FTC community. The prime directive is to both give rookie and senior teams a one stop place to share and acquire the information they need to make their seasons more efficient and productive.

In the spirit of Gracious Professionalism, this site is designed to be run by FTC teams for FTC teams. Through the ORFTCNetwork, teams can truly make a difference in their community, get younger kids excited about robotics, and promote their events, contributions, and technical expertise. This year, the mobile site is up and running, allowing teams to quickly and easily access the site on their mobile phones:



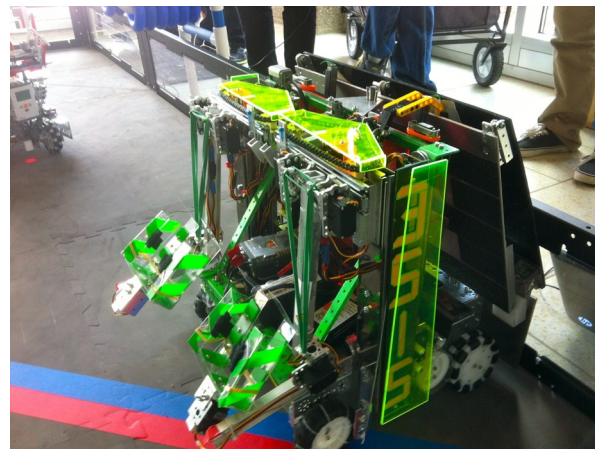
Hopefully, FTC Network sites will go viral and adjacent sites will pop-up across the United States and perhaps in other countries to further promote the team-to-team collaboration, and spirit of FIRST and gracious professionalism throughout the FTC community.

<http://orftcnetwork.net>



ROBOT OVERVIEW

- **Dual ring** collecting and scoring arms, one for each dispensing peg. Simultaneously can collect and score in different heights.
- **XY Linear Slides** attached to each arm make scoring rings on top pegs or any adjacent different height peg possible. Independent arms allow versatile scoring patterns.
- **Arms** extend out and have long reach. Accompanied by XY linear slides, allows virtually unrestricted 3-D movement for scoring flexibility.
- **Infrared (IR) sensor** deploys during autonomous and makes a controlled feedback loop autonomous program possible. Robot success rate in autonomous mode is very high.
- **Deployable ramp** at end game is friendly to virtually all robots; wide incline, that deploys 100% of the time. Robots may get up to 7 inches above the ground, scoring an immediate 60 points.
- **Lift** has the ability to lift an alliance robot up to 17 inches off the ground,. Employing lead-screw drive, it is safe and reliable.



TEAM GOALS

Engineering:

We decided to join the FTC (First Tech Challenge) competition to learn more about advanced robotics, develop hands-on mechanical construction and engineering skills. See the Core Value Section for more info.

Community Connect:

We have always adopted a "EE" philosophy (Encourage & Educate) to make a difference in our community. We also decided to embody the spirit of gracious professionalism more by being involved in the FIRST community. We volunteered at the Oregon FIRST LEGO League (FLL) state tournament, . At the Glencoe High School FTC QT we assisted many rookie teams with numerous mechanical and software issues and helped them pass inspection, ~5 rookie teams were saved (could compete) as team robot was previously inoperable, and also served as field inspectors. We hosted the Sunday FTC tournament at OMSI, and hosted a huge well attended elementary school science fair, where we showcased our robots as well as information on the FIRST programs. Parents and kids alike were interested in setting up JFLL and FLL teams. As evidenced by our pro-activeness this season, our goal is to enrich the FIRST experience for everyone in and out of the FIRST community. We hope to continue to do so as long as we are participating in FIRST robotics.

Core Values:

Our goals are to implement the FIRST core values as well as other insights we have gleaned from our experiences into our team:

- Teamwork, enjoying, and sharing the experience
- Gracious professionalism
- Leadership
- Cooperation
- Problem Solving