



## Holiday update



During the holiday season Team Paragon has much to be thankful for. The team also realizes the need to give back for all opportunities and gifts which we receive. During the holiday season we have been very involved in community service activities. We are grateful to the many groups who let us join their efforts to be able to give back to the community. We are grateful for the mentors who continue to dedicate their time to train us. As we rapidly approach build season we are wrapping up our training. We have continued with training during the meetings. In addition we have helped with the food drives of other organizations, as well as a turkey drive of our own. Finally, we have continued with our fundraising efforts. Happy Holidays to everyone.

### **Food drives**

In the spirit of Thanksgiving and giving back, Team Paragon returned to the town Green the beginning of November to host a food drive. We are grateful to the many community members who stopped by to donate. We collected \$100 in gift cards, \$327.55 and 6 turkeys. We learned after our drive that the stores were not really stocking turkey yet. We used the proceeds of our food drive to help with our other efforts for from the first and seconds weekend in November. For the second year we joined Windsor Emergency Medical Services, including WVA, WFD and

WPD, in their second annual food drive to support Windsor Food Bank. The following day and weekend, we spent the whole day in front of Stop & Shop assisting the local

emergency service with their annual food drive. We assisted in collecting over three thousand items as well as almost \$1600.

Thank you Windsor EMS for letting us join you.





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### Toy Drive

In December joined the Windsor Emergency Medical Services team again. On a VERY cold December weekend, Team Paragon participated in the EMS annual Project Santa to collect toys and money to provide gifts families in Windsor. While it was a rather cold day, we were all warmed by the generosity of all who donated as they drove on Bloomfield Ave. Not only were people the cause, but also generous to all of us. We collected about hundreds of toys, and randomly gave us fo



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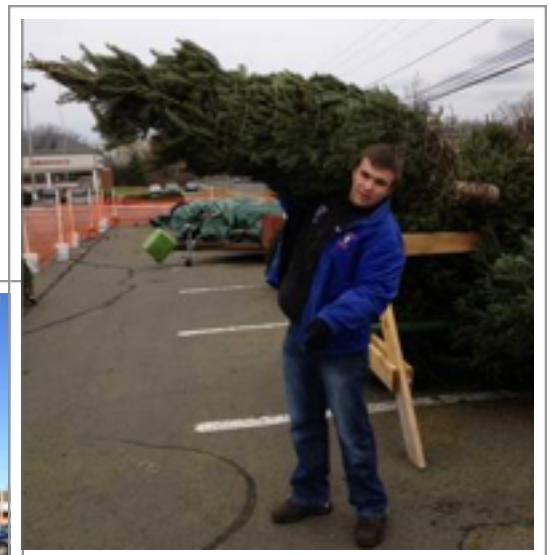
### Trees

In the spirit of Christmas and giving back, Team Paragon assisted the local Jaycees unload the Christmas trees to sell in December. It was hard work, but easily worth it for the joy those trees will bring local families.

Then during a Sunday in December, the JayCee's afforded



the team the opportunity to join them again. This time, the Team with the selling of the trees as a students. Thank you to the Jay of the team.



members assisted the JayCee's fund raising opportunity for the Cees for your continued support



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### Foreign Exchange students

We are also thankful that we have the opportunity to host multiple foreign exchange students, which is giving us the chance to learn about other cultures and spread our joy of robotic engineering with other people from different part of the world.



### Training

Chris Koenig has graciously been taking time from each meeting to help the students learn about the mechanical and electrical workings of the robot. For that, we are thankful.

In one lesson we learned about shafts, gear ratios, and torque. In general, 'gearing up' increases speed and reduces torque, while 'gearing down' decreases speed and increases torque. It all depends on the job that needs to be done! This will assist in the planning of the robots ability to drive

In another lesson, we spent the majority of the meeting discussing philosophical questions posed to us by a potential sponsor. There was a bit of a lesson on the power of pneumatics, and how they can shear the greatest pieces of metal with merely the power of air pressure. A point that will be necessary in controlling the robot. To follow up on the lesson from the potential sponsor, we continued the pneumatics learning how compressors, storage cylinders and pitons all interact.

To understand how the electronics relate to the mechanical we discussed different electromagnetic concepts in physics, relating to motors. Current and fields were big topics. We were also shown the brain of a practice robot, and explained how its switches, fuses, and circuit breakers work. Fuses are used instead of circuit breakers because a dead fuse is better than the robot breaking so much that it smokes.

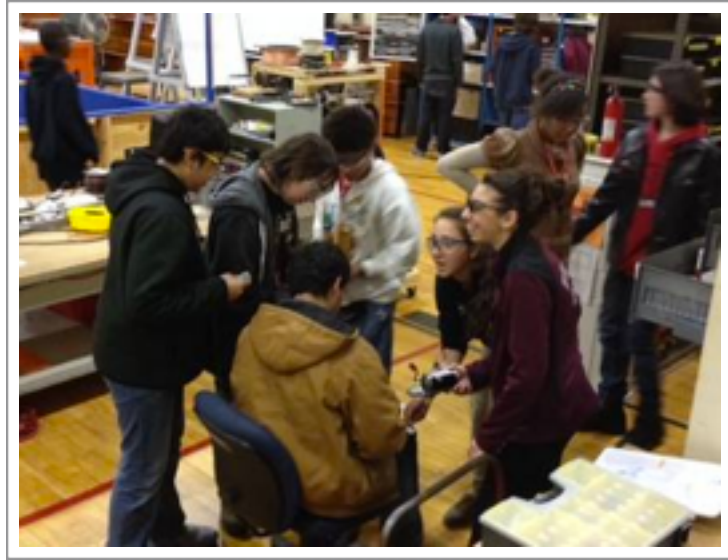




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We concluded our training with a scavenger hunt. In order to know to build a robot we need to know the parts of the robot and where they are stored at the build site. We searched for the components of the old Kit of Parts which we will be getting at kick off and plan to use to build the robot this year.



During Wednesday build sessions we continued to prepare the site for the build season. We have disassembled old robots to practice using hand tools. We practiced using the lathe to make adapters for mounting chain sprockets onto robot drive wheels.





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To further hone our build skills, we assembled an old chassis what was included in prior year's kit of parts from US FIRST. We figured out we can get this kit chassis together in less than one hour and



then get it running as quickly.





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Another team project was the start of a new Battery Charger cabinet. The old one has seen better days and in need of replacement. The new one will be more compact, easier to manage and fit into the pit at competitions much better giving us more room to work.



We also proceeded with updating the site to fit out needs. Boy does it take a long time to get a new place to be a home. Among the last tasks before kickoff and the start of the new build season, we sorted the last of our robot parts (a huge crate of assorted robot wheels) and made signs to easily identify the 15 different storage racks of robot parts. As there were not sufficient electrical outlets in the gym for all of our tools and computers, or in the offices for our computers, so the electrician had to install multiple new outlets.

We brought some of the old to the new with the reinstalling of the LED Paragon sign indoors and



the entrance sign above the outside doors.....we think we are ready!





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### Fundraising

In addition, we are thankful for our new and returning sponsors, who graciously grant the team funds with which to operate. Without you we would be lost.

### Up Coming Events

**KICK OFF!!!!!!! Jan 4, 2014**



You can follow Team Paragon at

[www.team-paragon.org](http://www.team-paragon.org)

or email us at [teamparagon571@att.net](mailto:teamparagon571@att.net)