

Chairman's Award - Team 537

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2019 - Team 537

Team Number

537

Team Name, Corporate/University Sponsors

Rexnord Corporation/GE Healthcare/Rockwell Automation/Hamilton School District&Hamilton High

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2018/2019 year and the preceding two to five years

Charger Robotics impacts and inspires its members in a passionate and powerful way. Approximately 95% of our alumni go into post-secondary education, 88% pursuing a career in science or technology. 25 of our graduates have mentored FRC teams, two of whom now head advisors for Team 537, and four have been on the Wisconsin Regional Planning Committee. In addition, mentors and alumni fill many roles at competitions, such as field reset, VIP tours, FTAA, Lead Robot Inspector, and Inspector Manager.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2018/2019 year and the preceding two to five years

Our team impacts our community through programs such as Adopt a Highway, Bleed for Bots, Relay for Life, and the SOS Food Drive. Our team has raised over \$9,537 for cancer research, and yearly at our blood drive, Bleed for Bots, we collect about 65 pints of blood, helping over 150 patients. In 2007, we adopted a highway, which we've continued to clean up three times a year. Additionally, as part of our monthly food drives, our team collected over 2,840 pounds of supplies in the past two years.

Team's innovative or creative method to spread the *FIRST* message

Team 537 spreads the ideals of FIRST® through 27 yearly demonstrations, including demos at each of the 11 days of Summerfest. We use Facebook, Twitter, Instagram, Youtube, and our website to spread FIRST®. We also spread awareness to hundreds of thousands of viewers through At The Control, a web-based program that provides live, up-to-date information on any team at any competition. We sell "Supergeek" shirts to fund a future FLL event and create awareness in the school and community.

Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate

We provide teams in need of samples with our documents such as prior Woodie Flowers and Chairman's submissions, as well as business plans. Our "Red Rovers" assist many teams at FRC competitions by lending tools and supplies, fixing robots, and building bumpers. Team 537 members also volunteer at the Wisconsin Regional by working in the machine shop and helping take down the competition field. Additionally, we provide the practice field for teams to use at the regional.

Describe the team's initiatives to help start or form other FRC teams

Team 537 and its mentors have had a hand in the formation of 13 FRC teams. Alumni of Team 537 have helped start Teams 2506 and 5096. Students presented at an interest meeting for New Berlin West, resulting in the formation of Team 5148. We give all of these teams additional help by providing them with published resources, such as document samples.

Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)

Team 537 started and mentors three FLL teams at our middle school, influencing over 30 students annually. In the upcoming year, the team plans to start an FLL program at a new school in the district, as well as a Jr.FLL program for our local elementary schools. With Team 537's involvement with the Waukesha County Robotics Coalition, a goal for the future is to expand FIRST® programs into other local schools.

Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program

We have provided teams with resources such as our Business Plan, Chairman's and Woodie Flowers award samples. Teams 5096, 4786, and 706 came to our meetings and learned how to run effectively. We donated \$537 and parts to Team 2194, and sent \$537 to Team 5855 to attend the FIRST® Championship. After attending our Mini-Regional and the Wisconsin Regional, Rep. Neylon authored a bill giving up to \$5,000 to FIRST® teams. Then-Governor Scott Walker signed the bill at the 2016 Wisconsin Regional.

Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)

Annually, team members mentor three FLL teams, assisting over 30 kids in building, programming, and researching the year's project. Since 2017, our teams have made it to state competition five times. We have also video conferenced with Teams 63 and 4818 to discuss our business plan and game strategies. We also work with other teams at our Summerfest demos, inspiring younger teams to become involved in demonstrating robotics in their communities.

Describe your Corporate/University Sponsors

We have developed a diverse sponsorship platform to reach a variety of companies. Our platinum sponsors, such as Rexnord and Rockwell Automation, donate \$5000+. Sussex Hamilton High School, a platinum sponsor, gives us helpful facilities. Gold sponsors donate \$2500-4999. Silver sponsors donate \$1000-2499. Our bronze sponsors donate \$500-999 and copper sponsors donate \$250-499. Any in-kind donations from groups are given an estimated monetary value that determines the sponsorship level granted.

Describe the strength of your partnership with your sponsors with special emphasis on the 2018/2019 year and the preceding two to five years

Our team hosts nine mentors from our sponsors. We attend multiple sponsor events, like the Rockwell Automation Fair and 2018's Robots at Rexnord Day. We also attended the Reich Tool and Design 50th year anniversary event. We worked with Rockwell to create a FIRST® internship program where FIRST® alumni are actively recruited due to their participation in FIRST® programs. At regionals, we also give VIP tours to our sponsors, introducing them to many aspects of FIRST®.

Describe how your team would explain what *FIRST* is to someone who has never heard of it

Not only do we build robots, but we build character. FIRST® is an organization that provides an opportunity for students to further their knowledge of science and technology in a friendly competitive atmosphere. Although our primary focus is to build robots, more importantly we build a community within a strong learning environment. We exemplify this through our use of Gracious Professionalism® and cooperation not just within our team, but with other teams as well.

Briefly describe other matters of interest to the *FIRST* judges, if any

We have greatly enjoyed increasing government participation in FIRST®. In 2015, we invited local representatives Wisconsin State Representative Neylon and Waukesha County Executive Farrow to attend our Mini-Regional. Neylon was inspired by the world of FIRST® and brought a bill forward, signed by Governor Walker at the 2016 Wisconsin Regional, that gives up to \$5,000 grants to robotics teams around the state. In 2017, Rep. Neylon authored another bill to extend grants to middle school teams.

Team Captain/Student Representative that has double-checked this submission.

Ty Kozic

Essay

Spreading the Message of FIRST®

Team 537 continues its longstanding outreach efforts and adds new activities as capacity allows. In 2007, Charger Robotics established two annual activities to promote FIRST® at the world's largest music festival, Summerfest, which has an annual attendance of more than 750,000. We staff a FIRST® information tent and hold full-day demos in the children's area each of Summerfest's 11 days. We also provide a playing field in the SportsZone for a four-hour mock competition with other FRC teams. Our Summerfest events enable Team 537 to reach thousands of people annually.

Since 2013, Team 537 has helped to promote FRC by providing our playing field and participating in a mock competition at the Lakeshore FLL Tournament hosted by FRC Team 3418. Over the two-day event this year, an estimated 800 student attendees were able to view the game and be inspired to join FRC.

Since 2002, Charger Robotics has hosted a Mini-Regional at Hamilton High School on the weekend before Stop Build Day. In 2018, 25 teams and 1,500 people attended. For those who couldn't attend, we offered a live stream which reached 564 people. This free-for-the-public event allows teams to get practice with their robots and allows us to connect FIRST® with our school and community. Last season, we showcased our robot at Marcy Elementary Math Night, an event where we displayed our robot to a local elementary school and gathered interest for starting a future FLL Jr. program in the area. Throughout our school, we show passion for FIRST® by decorating lockers with information about upcoming events, and maintaining two hallway display cases and a large plaque in the main entrance, giving visitors insight into opportunities that FIRST® provides.

Since 2011, we have demonstrated our robot at a local historic machinery event, that attracts people with mechanical and engineering interests. In 2018, the team added additional events to our calendar, including the Metropolitan Builders Association Summer Social event, Wisconsin State Fair, and Robots at Rexnord Day. Each event gave the team an opportunity to exhibit our robot and interact with local businesses and community members.

Partnering with Sponsors

Through our partnerships, we raise funds for our team and express the ideals of FIRST®. Team 537 was selected to represent Rockwell Automation and FIRST® at the Rockwell Automation Fair in Chicago in 2011 and 2016. Then-Wisconsin Governor Scott Walker drove our robot and learned about FIRST® from our team members at Reich Tool and Design's 50th Anniversary event in 2015. On a local level, Charger Robotics has built strong partnerships with local restaurants such as Cousins Subs for monthly food fundraisers that involve our entire community.

Government Outreach

In 2015, we invited Waukesha County Executive Paul Farrow and Wisconsin State Representative Adam Neylon to attend our Mini-Regional. They loved the experience so much that they both spoke at the 2015 Wisconsin Regional. In 2016, Representative Neylon authored Assembly Bill 665, allowing eligible Wisconsin high school Robotics teams to receive grants of up to \$5,000. This bill passed unanimously and was signed into law by then-Governor Scott Walker at the 2016 Wisconsin Regional. This bill has already distributed more than \$720,000 to 125 teams. Representative Neylon later authored Assembly Bill 564 in 2017 to extend grants to middle school teams. Team 537 testified, along with teams 1306 and 1259, before the Senate Committee on Science and Technology; the bill also passed unanimously. Both County Executive Farrow and Representative Neylon will be attending our Mini-Regional again this year, and we will continue to work with them to increase opportunities for FIRST® teams.

Inspiring Students

Team 537 creates a variety of methods of inspiring students of all ages to join the journey of FIRST® and STEM as a whole. In addition to the many activities mentioned above, we encourage local students to join our team by holding a robot demonstration and explaining the ideals of FIRST® and Team 537 to incoming students at the eighth-grade orientation. In addition, we participate in our school's Activity Fair to display our team to freshmen entering our school. Recently, we have begun working with a local Harley-Davidson dealership on its Battle of the Kings custom bike build, where we have gained knowledge of engineering and have worked to add our own robotics-oriented ideas to the project. This association with Harley attracts the interest of students who otherwise may not have considered robotics. Since 2017, Team 537 has attended many Girl Scout meetings, helping the local groups get involved with STEM and attain their engineering badges. We have also participated in General Electric's Women in Engineering Day event, at which students are able to interact with our robot while learning about FIRST®.

Partnership with our School

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Team 537 has created a lasting partnership with Hamilton High School to promote STEM education. Since 2002, our members have helped facilitate summer programs in engineering and robotics and encouraged the students to continue into FIRST® through FLL and FRC programs. In 2014, our school implemented STEM Academy to provide engineering classes. In 2018, Team 537 promoted a referendum allowing for an expansion of STEM labs and replacement of machinery and equipment; this passed, resulting in greater efficiency and precision in machining, benefiting both the team and students in STEM courses. The team has been recognized by our school board for promoting STEM and the FIRST® ideals.

Team 537 is known for inclusiveness. We value individuals for bringing their best efforts, whatever those may be and however packaged, to the team. Members who are not in formal positions can create their own upward paths by learning new skills, and proposing and managing projects. Several of our mentors joined the program after seeing their students blossom socially or transform into confident leaders during their time on the team. We have had three Regional Dean's List Finalists, two within the past six years. Team 537 alumni continue to impact the FIRST® community; more than 25 alumni have mentored FRC teams, countless more volunteer at regionals, and four have worked on the Wisconsin Regional Planning Committee. At FRC competitions, team members, mentors, and alumni volunteer in positions including field reset, VIP tours, FTAA, and Lead Robot Inspector.

Staying Connected with the Community

Team 537 uses many social media platforms to inform the public about FIRST® and our team. Since 2014, we have maintained a YouTube series called "Robo Recap," tracking our team's build season processes. In 2013 and 2015, Milwaukee's FOX6 News and talk show Real Milwaukee, covered our Mini-Regional.

In 2012, a student team member created "At the Control" (ATC), a web-based program that provides up-to-date information on all competitions: scores, team rankings, upcoming matches, and live video of the event. The site has had hundreds of thousands of viewers globally. In 2018, we redesigned ATC, creating a modern, inviting image and app.

Community Outreach

We give back to the community through events such as our blood drive, Bleed for Bots, which yields about 65 pints of blood per year, helping over 150 patients annually, and Relay for Life, through which we have raised over \$9,537 for cancer research. We generally clean our adopted stretch of highway three times yearly since 2007. In 2014, we started a monthly in-team food drive, donating over 2,840 pounds of food to our local food pantry in the past two years.

Assisting Other Teams

We help teams by providing published resources, such as Chairman's, Woodie Flowers, and business plan samples for their use. At competitions, we provide other teams access to our scouting system. During the 2014 and 2015 build seasons, our team conferenced with Teams 63 and 4818 to discuss our business plan.

When Team 2194 was struggling financially in 2014, our team assisted them by donating parts and \$537. We also donated \$537 to Team 5855 in 2016 and Team 6569 in 2017 to help them attend the FIRST® Championship. In 2016, Team 706 shadowed our meetings, Team 5096 doing the same in 2014.

This season, 13 students consistently mentored three FLL teams, involving 30 students. Since 2016, our FLL teams have advanced to state four times. In 2014, we began collecting Box Tops for Education to help build our FLL program. Since 2013, we have sold "Supergeek" shirts to raise money for funding a future FLL tournament.

At FRC competitions, we send "Red Rover" team members to roam the pits and help teams by providing materials and repairing their robots. At the 2016 Wisconsin Regional, we assisted four Turkish teams and rookie team 6223 with various pit necessities and helped to ensure their eligibility to compete. Because of our Red Rovers, we were awarded the Gracious Professionalism Award at the 2016 Rock City Regional and the 2018 Seven Rivers Regional.

Team 537 provides our practice course at the Wisconsin Regional, and helps set up and take down competition and practice fields. Since 2013, our team has helped run the metal shop at the regional, machining over 1,000 work orders. At our Mini-Regional, FRC teams test their robots in a competition setting; FIRST®-certified inspectors hold mock inspections in our pits. At this event, our team hosts one of the largest fundraising opportunities in our state, the WI FIRST® Raffle, raising over \$422,000 for Wisconsin teams.

Team 537 was a founding member of the Waukesha County Robotics Coalition in 2018. FRC teams in Waukesha County and surrounding areas are working together to start new FIRST® programs in area schools, increase interaction between teams with community activities, and collaborate on strategies for the FRC game. We plan to use this coalition to continue to grow FIRST® in our community.