Chairman's Award - Team 1912

Team Number

1912

Team Name, Corporate/University Sponsors

NASA Stennis Space Center/U.S. Naval Research Laboratory/DoDSTEM/Aerojet Rocketdyne/Textron Marine & Land/CLECO/Geocent, Inc./St. Tammany Parish School Board/Alliance Laser&Northshore High School&Salmen High School

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2016/2017 year and the preceding two to five years

1912 creates passionate, inspiring students with leadership skills, entrepreneurial spirit, responsibility, and a community commitment. 100% of our students have graduated and attended college, with 82% majoring in STEM fields; their experiences with 1912 prepare them for top schools like MIT, Columbia, Yale, Carnegie Mellon, and Duke. 38% of our recent alumni continued their robotics experience in college. In fact, 3 of our current mentors were former team members during our rookie years.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2016/2017 year and the preceding two to five years

After 12 years of extensive outreach, 1912 is instantly recognizable. We've reached 23,450 people of all ages with events in our city, which has a population of 26,526. With events at half the public schools, kids are introduced to our team at an early age through camps and festivals and continue that interaction with feeder school visits. Through Chamber of Commerce events, school board and engineering meetings, and state capital visits, our STEM advocacy impacts much of southeast Louisiana.

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

Beyond our demos, television appearances, and newspaper features, 1912 spreads the FIRST message through community fundraisers and donations. Participation in fun, cultural events, like crawfish cookoffs, Mardi Gras parades, and the NOLA mini maker faire, ensures that 1912 impacts people outside of the STEM field, while our fiery outreach initiatives (FIRST Flames, Torchbearers, Ignition Team, and Combustion Triangle) guarantee that our outreach program is effective and widespread.

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

1912 has produced 8 Dean's List Finalists and 3 Award Winners, a record in all of FIRST. Eager to help and inspire others, members on the team average around 60 outreach hours a year. Models of gracious professionalism, 1912 students advise and help teams that we later compete against through emails, video chats, conference calls, published materials, and pit responses. Experienced students, mentor newbies, and team females have engaged 3,800 girls through female-specific outreach events.

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

1912 has rebooted FRC in every Slidell high school, donating $5000 in starting funds to Team 3946 and taking in Team 4668. 1912 spoke on a panel at the Edison Electric Institute convention with Don Bossi to boost corporate support for FRC teams. We prepared a detailed school board proposal for FIRST teachers to receive pay, which has been requested by 12 other FRC teams; a $3000 stipend was approved for parish high schools, keeping FRC sustainable and supporting 6759's (Pearl River) creation.

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

Over the last year, we partnered with the Northshore Community Foundation to start 2 FLLJr, 3 FLL, and 2 FTC teams at 6 schools that had no FIRST program, bringing our total to 7 FLLJr, 6 FLL, and 3 FTC. To jump start them, we paid for registration, a rookie kit of parts, and a teacher stipend. Two years ago, we started our city's first FTC team. When bringing our robots to feeder schools and events, 1912 encourages kids to join their school's robotics team, or gives them resources to start one.

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

We support all levels of FIRST in our area. In the past 5 years, 1912 students have planned and run the LA FLLJr Expo, impacting over 90 teams, volunteered at FLL State Championships, and have run/hosted 6 FLL qualifiers. We hosted and ran 2 FTC meets and provided admin support and volunteers for FTC qualifiers. We are a controls Beta Test (8 yrs) and a Jumpstart Build host/assistant (9 yrs). We publish FRC resources on our website and assist other teams using technology and build space visits.

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)

At Jumpstart builds, we help rookie FRC teams (15 in 2 years) assemble a rolling chassis in a day, and provide followup support during the season. Every year, 1912 students mentor JrFLL/FLL teams in the area, while our Beta Test team shares results with other FRC teams through open house presentations. As one of the only remaining veteran Labview teams in the area, we share our controls expertise at local events. Teams often contact us for admin advice, including an FRC team from Ecuador.

Describe your Corporate/University Sponsors

Currently, 16 large sponsors (9 sci/tech, 3 education, 3 individuals and 1 manufacturing) provide us with more than $500 each, and some small sponsors donate less. In addition to monetary donations, corporate sponsors like NASA (house team since 2007), the Naval Research Laboratory, Textron, Aerojet Rocketdyne, and the National Defense Education Program give us mentors, supplies, event locations, and student internships, while Alliance Laser provides us with custom machining services.

Describe the strength of your partnership with your sponsors with special emphasis on the 2016/2017 year and the preceding two to five years

In thanks for their donations, funding, mentors, and other support, 1912 gives back to our sponsors by regularly participating in TakeYourChildToWork days, facility tours, and sponsor events. We recognize sponsors with plaques and keep them informed through regular newsletters, updates on social media, and an annual open house. In partnership with our longterm sponsor NASA (10 years) during Essence Fest, we promoted FIRST programs to 10,100 people over one week at the New Orleans Aquarium.

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

FIRST is a global organization that inspires a love and respect for STEM with robotics programs for all ages, from autonomous LEGO bots to 120 lb. teleoperated robots. Every year, new engineering challenges kindle scientific inquiry and critical thinking. Above all, students build crucial life skills: public speaking, cooperation, and collaborative sportsmanship. Students journey through FIRST to become leaders and mentors not just within the program, but in their everyday lives and communities.

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

-1912 is student-led and run -2:1 student:mentor ratio -Inspiring females: *40% of the team is female *10 of 12 presidents have been women *All technical captains are women *7 of our 9 team leaders are women -2016's impact: *Almost 45,000 people reached (43% increase, 125000 in 3 yrs) *1,406 student service hours (52% increase) *198 team hrs (46% increase) *40 events (43% increase), 42 days (35% increase, 12% of the year), 27 different places (50% increase) *180 FIRST teams served (47% increase)

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

Jade Grimes

Essay

In the last two years, 1912 has achieved its goal of creating a progression of FIRST programs in the area. We've ensured that children encounter 1912 and FIRST at least once before graduating high school. As a 12 year old team, we've spread our wildfire far beyond our community, reaching regional, national, and even international levels. Therefore, the following story may be fictional, but the character's experiences are all real events from our past 3 years.

Blaze's FIRST experience begins in elementary school after her mom encounters 1912 at state and district PTA conventions. Her mom hears that 1912 partnered with the Northshore Community Foundation to obtain a grant to bring the FIRST experience to 6 underserved schools by starting two FTC teams, three FLL teams, and two FLLJr teams,

using the grant to pay for their registration, rookie kit-of-parts, and a teacher stipend. Her mother and her teacher use the grant to start an FLLJr team. Blaze's team goes to 1912's 5th FLLJr State Expo, the only FLLJr event in the state, where she receives a custom trophy and a ribbon. That summer, she attends 1912's CSI science camp. Over the next three years, Blaze encounters 1912 at church camp, fit-as-a-firefighter camp, Hospice Camp, and the city summer camp.

During demos at take-your-child-to-work days at NASA facilities, 1912 members encourage Blaze to join a 1912-mentored FLL team at her middle school. Her team attends 1912's annual FLL qualifier (5 in 4 years). They cheer through the 1912 high-five line and advance to the state championship, where 1912 volunteers and demos its bot to 1800 other attendees. Later that year, Blaze notices 1912 at her city's STEM day. She is one of 650 kids to shoot air rockets at her school's STEM day, one of 300 helped by 1912 at Country Day's Summer camp, one of 400 to see their play, one of 300 to participate in 1912's 3 library demos as part of the Fizz! Boom! Read! Summer reading program, one of 5,000 to see the 1912 robot at her city's July 4th festival, one of 8,000 at the Crawfish Cookoff demo, one of 4,000 to find 1912 at a Zephyrs baseball game, and one of 2,000 at the Camellia City Kid's Fun Fest.

Blaze advances to her junior high's FLL team; they tune in to 1912's FLL-to-FTC transition chat on Twitter. Using this advice, Blaze's FLL team graduates to FTC and joins Slidell's other FTC teams, the first of which was established by 1912. She attends one of 1912's two FTC meets. Then, when a 1912 mentor becomes the FIRST affiliate partner representative of Louisiana, leading an effort to establish regional competition in Louisiana, she goes to the first two Louisiana FTC qualifiers ever, where 1912 students volunteer. Later that year, 1912 comes to her school for feeder school recruitment, keeping Blaze's interest high. 1912 sponsors the Best Engineering Project Award at her science fair, and she receives the award from the claws of the robot.

At freshmen orientation at one of 1912's two schools, Blaze heads straight for the blue shirts to join the team. At club days and bake sales, Blaze recruits her friends to sign up too. Soon, she's seen with 1912 around school as they participate in campus cleanup day, organize a 1912-sponsored campus recycling program, and appear at pep rallies, on school broadcasts, and in school murals. Blaze volunteers at 1912's soldering and CS Education Week coding classes for students.

As a donation to the Children's Wish Endowment, 1912 raises $1000 for a display for the school front gate that proudly features FIRST and 1912 logos painted by Blaze. She becomes involved in other 1912 charitable efforts, like gathering school supplies for flood victims, giving money to ALS through the ice bucket challenge, and making a 3D-printed prosthetic hand for a child in need.

By going to team social events (paintball, rockclimbing, pool parties), Blaze quickly makes many friends on the team. Together, they impact the community. She leads the team in front of 10,000 people in her city's oldest Mardi Gras parade, prepares turkeys for Thanksgiving donations, demos at a pumpkin patch, and volunteers at the state Special Olympics. Environmentally aware, she and 1912 help restore Louisiana bayous and clean Slidell in biannual litter pickups. Soon, speaking and appearing at high-profile events develops her social skills, and she proudly presents the robot to 3,000 attendees at the New Orleans Mini Maker Faire and to 8,000 mall shoppers at two invited visits to the New Orleans Microsoft store. Working with team sponsor NASA, Blaze and 1912 reach visitors with a team robot display in the Infinity Space Center during National Robotics Week and elementary students at the MAVEN launch countdown.

The summer before sophomore year, she actively involves herself in 1912's female outreach program, inspiring 3,000 girls at a Girl Scouts STEM Expo at Dillard University and another 800 at a Girl Scouts B.I.G. event at Southeastern University. Within the team, Blaze and the Combustion women lead the build of a 2nd robot for an offseason competition, ensuring equal participation opportunities to team females. She applies her programming skill as controls captain, one of 9 leadership spots, 7 of which are held by women.

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Realizing the importance of team sustainability, sophomore Blaze engages in mentor and sponsor recruitment by speaking and demoing at the INTRALOX Lunch and Learn, the International Society of Automation, the Tulane Engineering Forum, the Tri-State Engineering Conference, Aerojet Rocketdyne Engineering Week, a NASA-sponsored demo at the University of New Orleans, and the Louisiana Society National Engineering Week. She helps write the triannual sponsor newsletter, participates in sponsor visits, designs the 1912 sponsor commemorative plaque, and invites potential sponsors to the team's annual open house and robot reveal. As a way of thanking her teacher mentors and making FRC sustainable in the parish, she successfully petitions the school board for a $3,000 stipend for FIRST teacher mentors at her parish's high schools. Twelve other nationally located FRC teams request her petition, and 1912 begins to work on spreading the stipend to other state parishes.

To ensure FIRST makes an impact on teachers, businesses, and politicians, Blaze and her teammates speak and demo at state and district PTA conventions, the National Science Teachers Association student panel, school board meetings,

multiple parish Chamber of Commerce Expos, and state capitol visits.

As controls captain, Blaze leads 1912's 8th year as a controls system Beta Test Team, and brings students and mentors to participate in a feedback session at the FRC Championship. She uses her controls experience to help rookie teams build a rolling chassis in one day at 1912's 9th year of Jumpstart build days (impacting 15 rookie teams in 2 years). Her leadership skills promote her to president junior year and as the 10th female president (of 12) she meets with FIRST LA-MS to coordinate the FLLJr Expo. She presents a sustainability workshop at an FRC regional, and ensures that the 1912-run regional webcast runs smoothly.

As president, she leads important 1912 outreach events, promoting STEM to national audiences. The team reaches 10,100 visitors - including a family from Latvia - at the Audubon Aquarium over a week-long demo with NASA during Essence Fest. They speak on a panel promoting the creation of FIRST teams for the future energy workforce to 800 energy executives at the national Edison Electric Institute convention alongside FIRST president Don Bossi. 1912 is invited to demo FRC to ~8,000 engineers and educators at the American Society for Engineering Education's annual conference.

After all her hard work, as the team's 8th Dean's List finalist and 3rd award winner, Blaze inspires FIRST students and extends 1912's record for the award. During her time at Championship, she talks to teams, volunteers on the fields, and lends 1912 batteries to an Israeli team that can't fly with theirs.

As a senior, Blaze answers inquiries from other FIRST teams from as far away as Ecuador through email, by phone, and over social media. She and other 1912 seniors work to publish helpful manuals on the 1912 website. After her final year of participating in team traditions, she crafts spoof awards for her teammates and thank you gifts for team mentors and presents them at the annual team end-of-the-year luncheon. Blaze graduates high school with a varsity letter in robotics and joins the 100% of 1912 members who graduate with leadership skills, political awareness, entrepreneurial spirit, responsibility, and a commitment to the community. With her acceptance to an engineering school, Blaze becomes one of the 80% of 1912 alumni to major in STEM and the 100% who go to college. In college and beyond, Blaze gives back to FIRST by joining the 38% of recent 1912 alums who continue their robotics experience in college. After graduating, she returns to Combustion as a mentor.

1912's branding efforts have made our team instantly recognizable. Our events support a progression of FIRST programs and impact people of all nationalities and ages, creating a continuous cycle. We aim to inspire, and we can proudly say that we have. Through 2016 events alone, we engaged 43,845 people, totaling 123,224 in 3 years and indirectly reaching thousands more, including 65,000 through analyzable social media sites. Through this year's outreach, we directly served 180 FIRST teams, bringing our two year total to 304. The team completed 198 service hours, during which students completed 1,406 service hours, for a student average of around 60 hours a year. We've reached 23,450 people at 2016 city events, an amazing 10% of the parish population. Our fiery spirit continues to burn brighter, and we push the FIRST flames to greater heights every year. Here's to 12 years of unquenchable FIRST enthusiasm and to many years more!