



COUGAR TECH

FIRST TEAM 2228

CougarTech 2228 2011-2012 Team Business Plan





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1. OVERVIEW	3
2. GOALS	5
3. MEET OUR TEAM	7
4. HOW IS <i>FIRST</i> BENEFICIAL TO STUDENTS?	12
5. SPREADING THE MESSAGE OF <i>FIRST</i> , CREATING A <i>FIRST</i> IMAGE	13
6. COMMUNITY SERVICE, THE OBLIGATION OF GIVING BACK	14
7. BALANCE SHEET	18
8. AWARDS	20
9. WEBSITE	21
10. ALUMNI	22
11. CONCLUSION	23





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FIRST TEAM 2228

1 Overview

About our Team

Team 2228 is a US *FIRST* FRC robotics team established in 2007. Our team is composed of 41 student members (25% female which is up 15% since last year) and sixteen mentors. Our student run robotics team hails from the Honeoye Falls-Lima (HF-L) and Rush-Henrietta (R-H) school districts located in Western New York. We attend the Finger Lakes Regional every year. We are sponsored primarily by General Motors, Forsythe Technology, Carosa Stanton Asset Management LLC, and Quality Vision International. Other support comes from Pittsford Federal Credit Union, Xerox, Allworx, Van Bortel, and Mendon Foundation.

Our team is like a small business and what “company” would be complete without a business plan? We take a concept from inception of an idea through design, manufacturing, testing and marketing resulting in our final product for competition. In order to make our concept a reality we develop materials and presentations to entice potential sponsors. Our business plan is frequently being altered and modified to fit our current business position.

Mission

Our mission is to inspire young people to be leaders by engaging them in exciting programs that build science, math, engineering and technology skills. We strive to inspire innovation and foster life capabilities including self-confidence, communication and leadership. As a result of participation in *FIRST*, team members should learn:

- Machine design
- Computer programming
- Machining and electrical systems
- Positive attitude and team building
- Marketing and presentation skills
- Time management and project management

Vision

"To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology heroes."

Dean Kamen, Founder of *FIRST*

History:

The Rookie Year





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Team 2228 began in 2006 when a group of interested adults spread the word about regional competition, LEGO Leagues, and engineering design. To raise interest, technology teachers filled a bus with students and administrators and attended the Finger Lakes Regional Competition at the Rochester Institute of Technology. Experiencing the spirit and energy of this competition energized the group.

The robotics grassroots community formed a steering committee led by Paul Fleming, a mentor for many years. The committee built a base of support for the new team by enabling participation of local companies for machining, transportation and food. Our start-up contributor, Alstom Corporation, supported the cost of building the robot, competition registration, travel expenses, teacher stipends, and team shirts. We also gained the support of the Xerox Corporation, Mendon Foundation, Sage Rutty Financial Services, and Guida's Pizzeria.

In our rookie year, Team 2228 won the *FIRST* Rookie All Star Award and the Highest Rookie Seed Award at FRC. This earned us a trip to the national competition in Atlanta, which proved to be a fantastic bonding experience for the team and good competitive start for a rookie team.

The 2008 Season

In the 2008 season, our most notable achievements were made at the Ohio Buckeye Regional where we made it all the way to the finals. Our student retention rate for that year was ninety five percent, which we saw as a great achievement for a second year team.

How Two Teams Became One, the 2009 Season

In the 2009 season, Team 1930, The Comets of Rush Henrietta (R-H), New York found itself unable to continue as a *FIRST* robotics team. Losing the team was devastating for its most dedicated members especially since the school district could not provide assistance. The team was well respected and a symbol of technological innovation and scholarship. But there were no resources to draw upon. Early in November of 2008, members of former team 1930 came to HF-L to ask if there was any possibility of becoming part of team 2228. Without hesitation, the team unanimously voted to graciously accept seven complete strangers from R-H to their team. Since then, this relationship has become well cultivated.

Achievements for that year included advancing to the quarterfinals at the Finger Lakes Regional and participation in the Hartford regional. We also added Parsons Engineering as a sponsor. That year we received a generous donation from the Garelick family in memory of Lee Garelick, an important patron to the Rush-Henrietta team.

The 2010 Season

In the 2010 season we lost our lead sponsor, Alstom, a severe blow to the financial security of the team. Fortunately we received the continued support of Xerox, along with new support from Forsythe.





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We also earned a NASA grant, which allowed us to travel to Raleigh to attend their regional. We were semi-finalists in Raleigh and we attended the Finger Lakes Regional for our fourth consecutive year. We also continued the partnership with the students from R-H, who formed a rookie FTC team that school year.

The 2011 Season

The 2011 Season was a year of accomplishment at competition. We placed 7th at the RIT Finger Lakes Regional. We won the Entrepreneurship Award *sponsored by Kleiner Perkins Caufield & Byers* and the Coopertition™ Award. This was the *FIRST* year a mini-bot was used for competition; our bot was very successful. This was also one of our most difficult financial years because of lack of sponsors. A large percentage of our financial support came from only two sponsors. Our other sponsors could not donate money, so instead they donated their services, i.e. welding, cutting aluminum, providing acrylic plastic and electrical wire, etc.

2 Goals

Current Position

This year we made some significant changes. *FIRST*, we recreated our design process to become a more competitive team. After improving our financial situation using our new business plan we are now able to attend two regional competitions each year. To achieve this goal our team acquired a mentor experienced in corporate development, who helped us reach out to potential sponsors.

Team Goals

- Recruit directly from the middle school in addition to recruiting from the LEGO teams.
 - Measurement: Attend a one spring middle school event to recruit
- Expand our training efforts outside the build season to include:
 - Basic electrical skills
 - Sensors
 - Java Netbeans programming platform
 - Animation software
 - CAD, Inventor
 - Gears and gear ratios
 - Mechanical arms and actuators, pneumatic and electrical
 - Measurement: Each team lead will deliver a training module to their team before the beginning of the season.
- Be a teaching team:
 - Open Participation
 - Open Training
 - Everyone be successful





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- Add FTC to Honeoye Falls Lima High School scholastic programs to increase student skills and parent involvement
 - Measurement: Robotics incorporated into physics, technology and math curricula.
- Ensure that all members make a commitment to joining a team that meets all year, not just during build season.
 - Measurement: Complete the team handbook in 2012
 - Measurement: Use the handbook as the commitment device in 2013
- At Regional Competition, be selected by an alliance in the finals.
- Pursue the following regional awards: Safety Award, Chairman's Award, Website Award, and Business Plan Award.
- Increase community service activities to ten per year.
 - Measurement: Starting point in 2010 is seven activities
 - Measurement: By 2013, achieve the goal of 10 activities
 - Measurement: By 2017, maintain a total of 10 activities every year.
- Involve new parents into mentor roles
 - Measurement: Add one parent mentor skilled in engineering each year
- Find several mechanical mentors to expand the number of work cells in the shop in order to complete the robot on a shorter time schedule.
 - Measurement: Advertise in local newspapers, newsletters and with FLL parents
- Strengthen ties with FLL.
 - Measurement: By 2015, have student FRC members as mentors to FLL
- Identify skills needed for each team lead so as to prepare a skills based succession plan
 - Measurement: Provide a mentor presented leadership seminar for the team leads before the beginning of the official season.
- Increase the number of FRC graduates earning college scholarships based on their participation in *FIRST* programs.
 - Measurement: Starting point is 6 *FIRST* scholarships per year. Increase that by one a year until we reach 10 every year. The goal of 10 shall be achieved by 2015.

Financial Goals

- Increase corporate sponsorship to assure that this team attends two regional competitions every year.
 - Measurement: Sponsor total of \$20,000 for each season.
- Maintain a level of funding so that we do not have to ask parents for funding.
 - Measurement: In 2012, we don't ask for money by achieving sponsorship levels.
 - Measurement: By 2013, we have at least 4 sponsors able to provide consistent year over year funding in the range of \$5,000 to \$10,000





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- Begin each September with the funding needed for that year's competition
 - Measurement: Examine the financial records at the end of each competition season and assess our success.
 - Measurement: Promote sponsor search among parents and mentors on an ongoing basis
 - Measurement: Win grants whenever possible.
- Explore methods of funding and find ways for teens to approach developing business relationships.
 - Measurement: Approach High School Business department for training ideas and delivery methods.
 - Measurement: Mentors commit to developing relationships and expanding personal networks to promote funding of this team.

3 Meet Our Team

Team Organization

The student organized side of the team is comprised of the team captains, ad hoc (zing squad, drive, pit, scouting teams), specialty (finance, photo, safety, scribe, and social media), and the following sub-teams:

- Drafting and Design (D&D)
- Electrical
- Marketing
- Mechanical
- Programming
- Supplementary

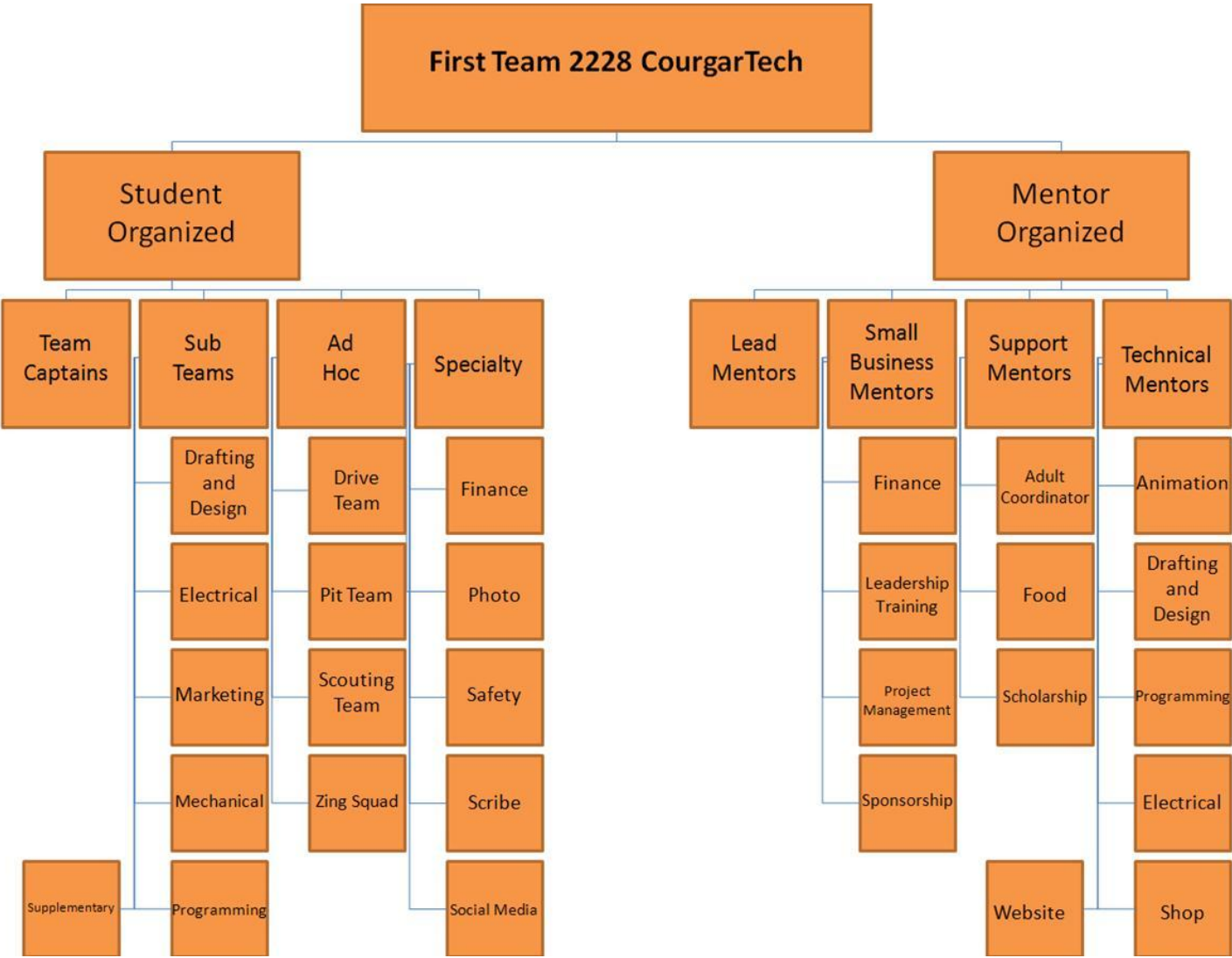
The team captains are empowered to make decisions that affect the entire team. They set direction for the team and are responsible for communication from the team to outside organizations. The captains are responsible for setting the proposed budget for the team and sub-teams as necessary. In the spring of each year, persons interested in heading each sub-team are elected by majority vote of students and mentors. As noted in their nomination statements, the new leaders can focus on training, recruitment, fundraising, community outreach or off-season build. The strength of Team 2228 is in the passion of the student leadership.





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Drafting and Design: Responsible for drafting all the robot hardware elements. This team maintains the mass, properties, and other data on the robot. They are responsible for submitting the Autodesk Award to *FIRST*. They also perform training and process improvements relative to CAD in the off-season.

Electrical: Responsible for designing, procuring, assembling, and testing the robot's electrical system. They perform electrical system training, research, and development in the off-season.

Programming: Responsible for designing, procuring, and testing robot control software. Perform programming training, research, and development in the off season.

Scouting: Responsible for evaluating other team's robots and assessing their strategic approach to game play during competitions. They develop and distribute sell sheets on our robot. The team is also responsible for providing input to the awards team regarding team awards during the competition.

Drive Team: Responsible for being well-versed in the rules and requirements of the game, staying up-to-date on information provided by *FIRST*, and ensuring that all team members are knowledgeable about all game play rules and requirements. Responsible for developing competition game play strategy, operating the robot, and playing the game during competition.

Supplementary: Responsible for designing, procuring, fabricating, and testing field elements. Perform projects like crate and cart improvements in the off-season.

Safety: Responsible for educating team members on safety rules, regulations, and procedures (team developed and school required). They are responsible for ensuring safety of anyone who enters the pit during competition.

Finance: Responsible for all business aspects of the team. This includes development and execution of the business plan, managing all financial and accounting practices and procedures, developing and managing the team budget, procuring team materials, reporting financial status regularly, and providing a yearly financial summary to the HF-L school board in December. The finance team also works closely with the sponsorship team to ensure that we are operating in accordance with all appropriate governing rules and regulations which were agreed upon prior to entering our sponsorship agreements.

Marketing Team

The Marketing sub-team consists of five functions: Branding, Outreach, Award Submission, Fundraising and Website. The work of Branding includes a team shirt that is redesigned every year, buttons, competition robot signage, brochures and other approaches to promote our team and *FIRST*. Outreach includes planning and participating in community activities. Our best writers belong to the Awards team. In addition to the *FIRST* FRC award submissions, these writers also provide material





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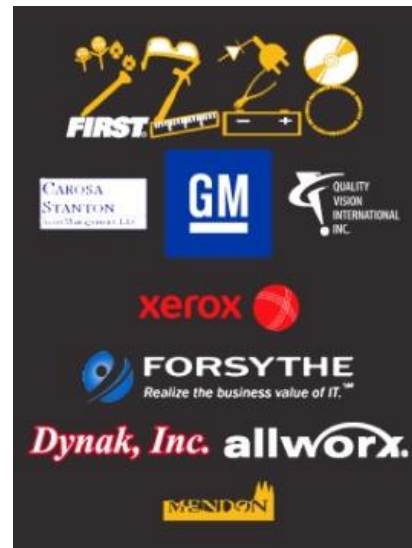
for school and foundation newsletters, articles for the local newspapers, chairman's video and business plan. Fundraising works closely with Outreach to develop opportunities to reach the community. Fundraising also actively recruits potential sponsors. Website maintains and updates the site information. In general, the marketing team participates in all aspects of team development except building the competition robot.

Mentor Support

CougarTech 2228 would not be able to function if it were not for the assistance of the team mentors. Team support is primarily made up of parents who take on the leadership role in activities necessary to support the team. They are responsible for: assisting seniors in applying for *FIRST* scholarships, food coordination for build season, lodging and food arrangements for regional travel, and the annual team banquet to celebrate our successes and the passage of leadership.



T-Shirt Front



T-Shirt Back





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4 How is *FIRST* beneficial?

- ✓ Over the last 5 years, students from our team have received \$360,000 in *FIRST* scholarships
- ✓ Almost all graduating seniors are entering post-secondary study in the areas of mathematics, science, or engineering.
- ✓ Students gain *FIRST* hand experience in science and technology from professionals working in the field.
- ✓ Students are introduced to a more competitive learning environment.
- ✓ It's fun.
- ✓ It creates opportunities for students to be involved in leadership.
- ✓ Students see how community service can touch lives.
- ✓ Students grow as a people by learning to be part of a team.
- ✓ Opportunity to develop interest and focus in Science and Technology
- ✓ Students learn to reap the benefits of hard work.
- ✓ The experience helps students decide on future careers.



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5 Spreading the Message of *FIRST*, Creating a *FIRST* image

Cultivating an image that is both unique and memorable should be an important goal for any organization seeking to promote social change. Our team focuses on spreading the *FIRST* message through the media, volunteering, and presentations to a variety of audiences in the community. We give awards to other teams for gracious professionalism, team spirit, game play, design, and rookie teams. Our website maintains an updated online profile of our team that contains very useful information about our team and about the *FIRST* mission. In competition, we try to present ourselves as an enthusiastic and supportive team. Our imagery includes banners, distinguishing foam cougar paws, our giant flag and of course the famous cougar suit. In our schools, Team 2228 has been very active in promoting the *FIRST* mission. This year we presented at Family Wellness Night and at the Activity Fair, both events at HF-L. We also run a booth at Cougar Creations, which is an arts and media festival for HF-L. Also, our team has been featured in local media such as newspapers, newsletter, and even the local morning program on NBC 10 News.

6 Community Service, the Obligation of Giving Back

Team 2228 has been involved with many projects over the past two years to serve the community that so graciously supports us. We believe that the message of *FIRST* extends beyond the robotics competition and the team alone. Our team participated in cardboard city, a fundraising event to aid the homeless. As part of the experience, participants must live in cardboard boxes for an entire night to simulate the life of a homeless person. We performed some garden maintenance and repotting for an elderly couple in the town of Honeoye Falls, also we helped with the Mendon Carnival and the Mendon Festival, where we run a booth. We organized a breakfast with Santa for disadvantaged children in the city of Rochester. We bought the children gifts and demonstrated our robot to them. We volunteered at Camp Smile, a camp for visually impaired children. We provided driving demonstrations with our robot and gave them a chance to drive the robot themselves. Several of our team members assisted team 1511 with their community outreach, Rochester Rampage, at the Monroe County Fair. The Rochester Institute of Technology held a Google Sponsored Event, CS4HS (Computer Science for High School Teachers). Our team was invited to lead a workshop for teachers about application of technology in high schools. Every year at the Rochester Museum and Science Center there is a summer fun camp for K-12 students. Some members of the team helped and mentored at the camp. They presented and demonstrated our robot to the campers. Several members of the team presented and demonstrated the robot and the idea of FRC at The University of Rochester where the FLL Regional Championship took place.

As part of our goals to spread the message of *FIRST*, Team 2228 has become more involved with the school system. This year HFL introduced “Pico-Cricket”, a web based program that teaches





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elementary age children basic engineering and design concepts. We have supported initiatives to increase the number of classes in the high school curriculum that cater to science and technology. One of these initiatives is the development of an “Informatics” elective course at the high school in conjunction with RIT. Lastly we have cultivated a new relationship with GCC (Genesee Community College) that has led to the launching of two new college courses to be offered to high school students. The courses include subject matter relating to biochemistry, cellular biology and human biology all popular subjects among students at the HF-L high school.

Community Activities:

- ✓ Camp Smile
- ✓ Breakfast with Santa
- ✓ Cardboard City
- ✓ Gardening and Plant Sale
- ✓ Crossroads Bed Race
- ✓ Mendon Firemen's Parade
- ✓ Family Fun Night
- ✓ Set-up of New Mendon Library
- ✓ Apple Clean-up of Mendon Station Park
- ✓ Boy Scout Dunking Booth Dunks
- ✓ HF-L District Safety Committee

Other *FIRST* Programs:

- ✓ FTC-FRC Mini-Bot Cooperation
- ✓ Mentored and Financed the HF-L *FIRST* Lego League Team
- ✓ Refereed Jr. *FIRST* Lego League Local Competition
- ✓ Mentored Jr. *FIRST* Lego League Team
- ✓ Share Our Award Winning Business Plan with the Naples FRC Team 1551

Spreading the Message:

- ✓ Present and Demonstrate the Robot at Mendon Fireman's Carnival
- ✓ Present and Demonstrate at Mendon Station Festival
- ✓ Give Presentations to HF-L Elementary and Primary Schools
- ✓ Present and Demonstrate at Honeoye Falls Open House
- ✓ Present and Demonstrated at Honeoye Falls Annual Music and Arts Festival (Cougar Creations)
- ✓ Present at the HF-L Club and Activity Recruitment Fair





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- ✓ Participate in Family Wellness Night
- ✓ Participate in Rochester Rampage
- ✓ Present and Demonstrate at the Google Sponsored Event, CS4HS (Computer Science for High School Teachers), at Rochester Institute of Technology
- ✓ Present and Demonstrate at the RMSC's (Rochester Museum and Science Center) Summer Fun Camp
- ✓ Present and Demonstrate at the Finger Lakes FLL Regional Championship
- ✓ We created a LinkedIn group, "US *FIRST* Robotics-Greater Western New York Mentor and Alumni Network." An open forum for US *FIRST*, FRC, FLL, etc. Robotics mentors and alumni in the Greater Western New York area.

Media:

- ✓ Mendon Foundation (Newsletter)
- ✓ Sentinel Publishing (Local Newspaper)
- ✓ Henrietta Post (Messenger News)
- ✓ News 10 NBC (Local TV News Station)





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We volunteered and demonstrated, at a Breakfast with Santa, held in the Ryan Community Center in Rochester. Our team talked about math and science programs and how young adults can get involved with programs in their communities.



This year we supported our sponsor, the Mendon Foundation, and showed our robot at the Mendon Festival. We also talked about our schools robotics team.



This is our fourth year of combined membership between Rush-Henrietta and Honeoye Falls-Lima schools.



Every year we volunteer and showcase our robot at our local Mendon Fireman's Carnival. We talk about our schools' robotics team and how it promotes advancements in technology.



We invited all local teams in the Rochester area to an ice skating event.





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We volunteered and drove our robot at Camp Smile, a day camp for visually impaired children.



We presented and demonstrated our robot to the Honeoye Falls Elementary and Primary Schools.



Our team has written articles for the Mendon Foundation newsletter and The Sentinel, a local newspaper. We have also had articles written about us in the Mendon Foundation newsletter, The Sentinel, HFL District News Letters, and the Democrat and Chronicle. We have even been featured in the News 10 NBC Morning Program.



This year we showcased the practice robot at HF-L Wellness Night. We talked to community members about the importance of science and technology and allowed kids to drive the robot.



Several members of our team participated in Cardboard City, where students spent a night in a cardboard box to raise awareness of extreme poverty in the world.



Several members of our team participated in the Crossroads Bed Race





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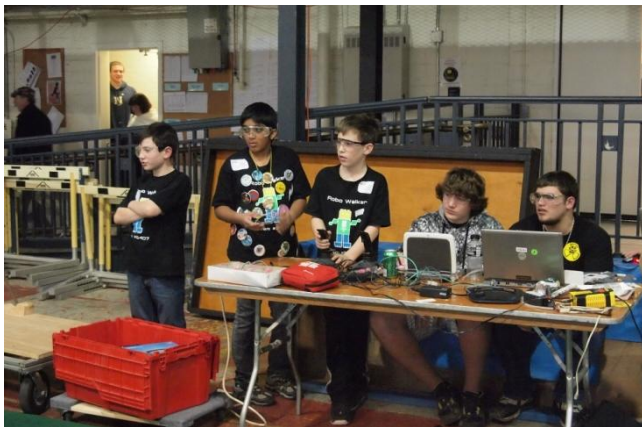
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To raise money, we held a pancake breakfast at a local Applebee's.



Several members of our team cleaned up apples in the town park, Mendon Station Park.



Several members of our team presented and demonstrated at the Finger Lakes FLL Regional Championship



Team 2228 participated in the HF-L activities fair to recruit new members. This year, we gained 17 new members.



17 of 23

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7 Balance Sheet

	Budget 2008-2009	Actuals
Beginning Balance:	\$20,859.31	\$20,859.31
Revenue:		
Corporate Sponsors	\$17,550.00	\$7,010.00
Fund Raising	\$1,250.00	\$1,270.12
Regionals (parents)	\$9,660.00	\$9,766.04
Miscellaneous	\$0.00	\$1,088.70
Total Income:	\$28,460.00	\$19,134.86
Expenses:		
Marketing	\$2,000.00	\$1,429.98
Support	\$750.00	\$568.94
Ruckus	\$350.00	\$379.35
RIT Regional	\$6,000.00	\$6,000.00
FLL teams	\$600.00	\$600.00
Tools	\$750.00	\$817.77
Robot parts	\$3,550.00	\$4,141.27
Connecticut Regional	\$4,000.00	\$4,000.00
Regionals (food & transportation)	\$9,660.00	\$9,237.10
Food & Banquet	\$100.00	\$312.46
Awards	\$200.00	\$66.78
Shipping	\$400.00	\$508.46
Miscellaneous	\$100.00	\$113.74
Total expenses:	\$28,460.00	\$28,175.85
Amount Left:	\$20,859.31	\$11,818.32

Our Budget Sheet helps to keep each sub-team aware of how much money is available for their use. We update this at least every other week to keep them current.

2008-09 was the model and goal for all our financial planning. Until this season we didn't implement our goal to get support from corporate sponsors. We are implementing and achieving our goals.

	Budget 2011-2012	Actuals '11-12
Beginning Balance:	\$14,025.98	\$14,025.98
Revenue:		
Corporate Sponsors	\$9,000.00	\$14,850.00
Fund Raising	\$2,000.00	\$1,685.00
Grants	\$0.00	\$0.00
Individual Contributors	\$5,000.00	\$2,930.00
Regionals & Ruckus (parents)	\$0.00	\$0.00
Miscellaneous	\$0.00	\$0.00
Total Income:	\$16,000.00	\$19,465.00
Expenses:		
Marketing	\$1,200.00	\$264.61
Support & Awards	\$500.00	\$202.06
Ruckus	\$250.00	\$190.66
Regional Registration	\$9,000.00	\$9,000.00
FLL teams	\$0.00	\$0.00
Tools	\$700.00	\$619.90
Robot parts	\$3,400.00	\$1,907.89
Regionals (food & transportation)	\$0.00	\$0.00
Food & Banquet	\$350.00	\$0.00
Shipping	\$500.00	\$113.97
Miscellaneous	\$100.00	\$1,017.61
Total expenses:	\$16,000.00	\$13,316.70
Amount Left:	\$14,025.98	\$20,174.28





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SPONSORSHIP BENEFITS	Platinum Sponsor \$10,000+	Sustaining Sponsor \$5000 - \$9,999	Leadership Sponsor \$2,500 - \$4,999	Associate Sponsor \$1,000 - \$2,499	Sponsor \$500- \$999	Patron \$100 - \$499
Thank You Note	X	X	X	X	X	X
Pictures of Team	X	X	X	X	X	X
Website Presence	X	X	X	X	X	N/A
Print Media Presence	X	X	X	X	X	N/A
T-shirt Promotion (size/name)	Top Billing Largest Font	Second Billing Medium Large Font	Third Billing Medium Font	Fourth Billing Small Font	N/A	N/A
Robot Promotion (size/name)	Large Sign	Medium Sign	Small Sign	N/A	N/A	N/A
Tickets to Team Awards Banquet	X	X	N/A	N/A	N/A	N/A
Team Support at Sponsor Corporate Event	X	N/A	N/A	N/A	N/A	N/A
Company Name Listed in Conjunction with Team Name	X	N/A	N/A	N/A	N/A	N/A

Our Sponsor Fact Sheet establishes a donation structure. It demonstrates what benefits sponsors received at each level of donation.





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8 Cougar Tech Placement and Awards-

<i>Award giver</i>	<i>Year received</i>	<i>Event given at</i>	<i>Title</i>
FIRST	2007	FLR	Highest Rookie Seed Award
FIRST	2007	FLR	Rookie All Star Award
FIRST	2011	FLR	Kleiner Perkins Caufield & Byers Entrepreneurship
FIRST	2011	FLR	Coopertition Award
Xcats	2008	FLR	Outstanding Sportsmanship
Xcats	2008	Buckeye	Most Awesome fun team Mascot
Xcats	2007	Championship	Outstanding Sportsmanship
Xcats	2007	Championship	Coolest Giveaway
Xcats	2007	FLR	Best Alliance Partner
MOE	2007	FLR	Unique Design Component
Division by zero	2007	FLR	Rookie Sensation Award
Arctic Warriors	2007	FLR	Best team Spirit Award
Lightning Bolts (team 2010)	2008	Buckeye	Outstanding Motivated
Ruckus	2007	Ruckus	Restless Spirits Spirit Award
Ruckus	2008	Ruckus	Henchmen Competition Finalists
Ruckus	2008	Ruckus	Deadheads Gracious Professionalism Award
Ruckus	2009	Ruckus	Henchmen Competition Finalists
Sparx	2007	Championship	Most Spirit Award



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9 Website

In 2007, we launched our website. For several years, we updated that website as needed. In 2011, the website was re-launched, but it was very limited. This year, a new mentor joined our team with a great amount of professional experience in website design, and we have made many improvements under his guidance. For example, we updated the home page, the media page, our members list and added a page for mentors. In 2012, we also restructured our calendar to better our inter-team organization and also added game-specific information. We also have links to all of our social media sites including LinkedIn, Twitter, and a Facebook fan page, and our award winning business plan is open for public viewing. This will help rookie and veteran teams who are struggling financially. However, we are especially proud of our improved “What is *FIRST*?” page, in which we can really promote this program to a larger audience.

URL: <http://www.hflrobotics.com/>





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10 Alumni

Every year the founder of *FIRST* Robotics, Dean Kamen, delivers homework. He tries to add variety every year, but one of the assignments appears on the list every time he talks to us. This assignment is to follow team members and report on how they are using the skills they acquired while active in robotics.

Team 2228, Cougartech, started in 2006, graduated its *FIRST* set of high school seniors in 2007. Four years have passed and many of those rookie season seniors have now graduating college. While each of their experiences is unique, they are all beginning their work somewhere in the areas of science, math, engineering, or technology.

Brian Cosgrove, 2007 team lead, graduated from Syracuse University and is beginning a PhD program in biomedical engineering at the University of Pennsylvania. Andy Hunt graduated with a degree in computer science from Northeastern University this spring and is a software developer with CDM Engineering Consultants. Christoph Napp is scheduled to finish his mechanical engineering degree at Clarkson University in May of 2012 after which he will begin working in the transportation unit of General Electric. James Oleksyn was last seen heading for RIT is fulfilling his ROTC commitment in the US Army. Craig Porter graduated from the Air Force Academy and is now at the Air Force Institute of Technology. Connor Regan took his mechanical engineering degree from Rensselaer Polytechnic Institute to New Hampshire where he is a product engineer at Freudenberg-NOK developing sealing products for rotating shafts. Matt Rhone is a member of the US Marines deployed to the Middle East. Justin Schneider graduated from Vanderbilt University and is using his mechanical engineering degree at Schlumberger on oil and gas rigs in the Gulf of Mexico. Kyle Travers will graduate in December from Rochester Institute of Technology with a degree in computer science and engineering management. Josh Turner is in his fifth year at RIT where he is the technology director for Kosovo Wind Gardens delivering wind turbines to support rural development in Kosovo. Josh Terry graduated from Champlain College with a degree in game production. He is now at Raven Software designing for Activision's Call of Duty: Modern Warfare 3.

As our 2007 team members join the ranks of adults, we look forward to their contributions and innovations in energy, software, medicine, machines, and all the other places their futures will take them. Most of our later graduates have gone into similar fields at places like RIT and Clarkson University. Dean Kamen would be pleased with their progress.





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FIRST TEAM 2228

11 Conclusion

A business plan, like a business, is dynamic and ever changing. Our business plan is always being altered and modified. Our overall success is incredibly mind-blowing, especially this year in business revenues. We reached our goal of having \$20,000 in corporate sponsorship, and plan to receive this amount every year. Also, our team has remained a strong competitor in awards and robot performance. Unlike some teams, ours is successfully led by students. Since our team is student run, we have a stronger overall connection and identity, which gives us an advantage over the opposing teams.

Though we work for six weeks straight to produce a marvelous robotic creation, the real product is the graduating seniors we send to STEM programs. In 2011, we had 18 seniors on the team, all of whom graduated, and 13 out of 18 went into STEM fields. The 5 other graduates went into professional fields. As we become a more prominent team in the community, it has been easier to spread the word of *FIRST*. This helps us reach towards the vision we share with Dean Kamen, "To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology heroes."



CougarTech Energized 2011-2012
Team Leads
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