



Spreading the Word



Since its inception three years ago, MorTorq has always strived for success. During the first two years, the team's main goal was to establish a **strong foundation**. Its initial focus was gaining necessary experience and making important contacts in order to develop and sustain a productive program. It continued to build upon basic fundamentals and **set up shop** in its second year. With the foundation firmly in place, MorTorq has moved on to its next goal—**spreading the word**. By “spreading the word”, the team hopes to promote the mission of FIRST in a myriad of ways and demonstrate to the community that science and technology can be as cool and exciting as sports or entertainment.

Experiencing Team 1515

Team Name: MorTorq
Robot's Name: Mad Max
Years in FIRST: 3

Revving-Up (pre-Kickoff):

- Held Several Recruitment Meetings
- Elected and Appointed New Leaders
- Received 2nd Room for Program
- Became ROP (Regional Occupational Program) Class
- Attended 2 Workshops

Team Composition:

- 61 Total Members
- 7 Freshmen, 18 Sophomores, 27 Juniors, 9 Seniors
- 15 Girls, 46 Boys

Team Structure:

- Building and Design (26)
- Business and Writing (19)
- Animation (10)
- Programming (6)
- Support: 10 parents, 2 faculty advisors, 10 mentors, 9 college students

-making an impact-

“I...congratulate the Beverly Hills High School Robotics Team on its many awards and accomplishments and further recognize the team's important role in encouraging science and technology.”

Stephen P. Webb, Mayor of Beverly Hills

Two years after establishing a team, MorTorq's goal was to spread the message of the FIRST program to the larger community. By establishing multiple lines of contact and communication, Team 1515 has started to generate positive views about science and technology in the community with the accompaniment of excitement, innovation, and recognition. On February 20, 2007, the City of Beverly Hills commended the efforts by MorTorq and Mayor Stephen Webb presented the team with a city proclamation in its honor.

This year, MorTorq has encouraged interest and excellence in science and technology in multiple ways. The team went on the air, creating and producing its own television series. It turned to the web, developing a webpage and web-based newsletter. It spread the word in various news publications as well as through its multiple fundraising efforts. It encouraged learning and innovation through its mentoring and educational activities and enthusiastic participation in FIRST events.

“The impact of the FIRST program is tremendous. Students gain confidence and learn how to work together in order to complete all tasks. These skills are integral to future success in the work force and in life.”

Eileen Kahn, Parent and Teacher

Introducing MorTorq TV

In the 2006-2007 year, Team 1515 launched MorTorq TV, a completely student-produced television program. This innovative outreach tool covers up-to-date MorTorq news, such as building progress, team events, and FIRST competition details. In addition, the broadcast includes news segments on technology and robotics, along with interviews, tips-and-tricks, and humorous robotics-related skits. MorTorq TV attracted a wide audience by including students outside Team 1515 in video segments. The show is not only available online on YouTube and iTunes but is also broadcast city-wide over 50 times a week on the Beverly Hills High School television channel KBEV. Producing this television show has been an exciting experience for all of the team's members. In the first two episodes alone, over 30 MorTorq members participated in the production of the show and learned what it is like to work in a television studio. MorTorq TV has been an effective way for the team to convey the message of FIRST to the community and has served as a rewarding opportunity for team members to gain new skills.



"We're really excited to see the work that Team 1515 has done in producing MorTorqTV. This professionally-done show does a great job sharing what MorTorq has been working on with other teams."

-Greg Marra, The Blue Alliance

Improving Communication

MorTorq has designed a team website to provide up-to-date information on the team's accomplishments, as well as articles on alumni, mentors, and team members. In addition, the team has spread the word within the community through an original, weekly web-based newsletter, consisting of student-written articles about the current status of the team, along with team background information and member biographies. Its content represents not only the experience of MorTorq members, but also that of the entire FIRST family. This newsletter enables the team to provide regular information updates to everybody involved in the program. The team sends out the newsletter every week to an e-mail list of 250 people including parents, teachers, students, and community members.

Team 1515 also conveys information via the news media. For instance, Beverly Hills High School's newspaper, Highlights, regularly updates the school on the progress of the robot. The Highlights editor-in-chief is a member of MorTorq's animation team and has helped increase school interest in Beverly Hills Robotics and the FIRST program. Team 1515 has also been featured in local Beverly Hills newspapers, such as The Beverly Hills Courier and The Beverly Hills Weekly.



Reaching Out at Engineering Day

MorTorq's educational outreach is not limited to the Beverly Hills High School campus. Middle school students from all four Beverly Hills public schools competed against each other in a VEX competition designed by MorTorq members to excite them about the engineering process. In order to purchase parts, tools, and playing field material for the teams, MorTorq team members raised \$4,000. A kickoff lunch was staged with 50 middle school students. At the kickoff, team leaders discussed the purpose of FIRST and rules to the VEX competition. The students had 10 weeks to build a working robot. MorTorq members came to their schools twice a week to help mentor and aid in the building process. On May 25, 2006 the VEX teams assembled in the high school gym to compete during MorTorq's first Engineering Day. Representatives from MorTorq corporate sponsors were on hand to teach the kids and their parents about engineering. The event was a huge success and resulted in a large influx of interest in the program by middle school students, their parents, and the community as a whole.

Giving Back To The Schools



Last spring, Team 1515 planned the Classics for Charity Car Show with their sponsor Mercedes-Benz of Beverly Hills. The objective of the car show was to raise money for the local education foundation, which supplements funding for public schools. The team helped raise \$50,000 at last year's event and hopes to exceed that performance this year. Team members attended all corporate planning meetings, submitted ideas, and provided artwork and designs for promotional materials. The team also interacted with the community during the event. MorTorq had its own booth to exhibit its robot and promote itself and FIRST. Children and adults visited this booth in droves, including Governor Arnold Schwarzenegger who was informed by team members about the FIRST Robotics Program. Currently, they are involved in planning this year's show, which will take place on April 15th, 2007.

Passing On Knowledge

Team 1515 passed on the tradition of mentoring, while working with Team 1197 from South Torrance High School. The MorTorq team president gave programming tips and an alumnus helped explain how to run motors and electrical systems. A Moog mentor gathered this information from team members and distributed it to Team 1197.

In addition to its outreach efforts, the team remembered to teach its own members about the meaning of FIRST. MorTorq attended two workshops this year in preparation for the robotics season. On November 4, fifty members of MorTorq went to California State University at Northridge. Newer members learned about building, business, and animation while older ones refreshed their memories after a long off-season. Of all the teams there, Beverly Hills High School had the most students in attendance. There, they met Roy McKee, a member of the LAPD Bomb Squad who became a mentor and a valuable asset to the team. MorTorq also held a workshop for members on December 20. To teach the fundamentals of engineering to new members, teams of two competed against each other in a small contest. The teams' task was to build a superstructure out of balsa wood that could hold as much sand as possible. This showed team members the process of moving from problem to solution in engineering. The winning team received two tickets to Disneyland, graciously donated by our mentors at Walt Disney Imagineering. One of the mentors even brought his wife and parents along.

Fundraising

MorTorq aims to further enhance awareness of the mission of FIRST through its fundraisers. During winter break, MorTorq held a community service and fundraising event at the Century City Shopping Mall. They handed out flyers with information on the team and FIRST program. Members volunteered to wrap gifts for holiday shoppers, who in turn gave donations to the team. Even the superintendent of schools stopped by to get her gifts wrapped. After two days of hard work and fun, the team raised almost \$900 and spread the word about the FIRST program.

At another fundraiser, MorTorq team members presented their accomplishments during a dinner at a team member's house. Parents, students, and community members came and showed their support. The team spoke about the inspiration of FIRST, exhibited the animation video and robot, and ultimately raised \$2,400.



Sharing and Caring

One of the most valuable aspects of our program continues to be the strong relationship between our mentors and students. This year, MorTorq once again benefited from our experience with Joel Payne, Mike Gordon, Guillermo Herrejon, and Mike Wallden of Walt Disney Imagineering; David Seidel of JPL; Daniel Feith of Moog Aircraft Group; Steve Ferron and Lucas Pacheco of Hawthorne High School; and parent/teacher Eileen Kahn. Coming aboard this year as new mentors were Roy McKee of the LAPD Bomb Squad and programming teacher Howard Stahl of Santa Monica City College. Perhaps most inspiring was the return of MorTorq alumni to advise and mentor the current team. At the end of last year, many of the more experienced members of the team graduated. However, they made themselves consistently available, if not in person, by phone or e-mail. This sharing experience truly personifies our goal of "spreading the word" and seeing the momentum in the vision of FIRST build.

A senior member of the MorTorq animation team is confined to a wheelchair afflicted with Muscular Dystrophy (MD). Despite his handicap, he comes in everyday to work on the animation and is a vital member of the team; his expertise earned him the MVP award for MorTorq's winning animation entry last year. In his honor the team is setting up a MD fundraiser in May involving FIRST teams and corporate sponsors.

Team 1515 has also been active in the broader FIRST community. On February 18th, MorTorq and other FIRST teams helped run a scrimmage at Hawthorne High School. Team 1515 assisted Hawthorne in setting up the field and managing registration. At the event MorTorq received an award for its **gracious professionalism** from Team 1641. Involvement in this event helped forge an even stronger bond between MorTorq and its mentor school Hawthorne.

"Schools teach us many things, but they do not teach us why we need to learn. As students we need inspiration and motivation—we need help discovering our dreams. FIRST Robotics is not like school. In robotics we are learning how to design a robot, how to fabricate its parts, how to obtain funding, how to build community support. We are learning to improvise, organize, specialize; and we are learning to prioritize, strategize, and optimize; we learn to do it in six weeks; three months; a year. We are learning to solve bigger problems one step at a time, and FIRST teaches us about solving problems and why that is important. It teaches us about working together and a little about our dreams. FIRST Robotics is an invaluable asset for students."

-Nick Sarnoff, MorTorq Alumnus, Duke University

"Participating in FIRST Robotics was perhaps one of the most fulfilling experiences of my high school career. It was an incredible leadership experience and an awesome opportunity to work with professionals while still in high school. I not only learned about building and engineering, but also important skills involving organization, leadership, and perhaps the most important – learning to work with others in a competitive setting and ensure my voice was heard. With so many smart people in the room, I found it to be vital that my opinions were heard and honored. I would recommend US FIRST Robotics to any high school student with an interest in business, computer animation, engineering, or leadership."

-Eli Chait, MorTorq Alumnus, UC Berkeley

Planning for the Future

MorTorq is expecting the 2007-2008 year to be an exciting one for the team. With the anticipated opening of a new math, science, and technology building at our high school, they will have greater opportunity to further the mission of FIRST. Team 1515 hopes to encourage more academic appointments in key areas by the district and support efforts to raise funds to provide state-of-the-art technological resources within the schools.

MorTorq has looked into the possibility of setting up a FIRST Lego League team for a long time. We hope to set up a permanent program geared towards elementary and middle-school-aged students through the Parks and Recreation Department in our city in order to engage and prepare future members of our team and the broader community.

"FIRST is more than just about robots; its about people. FIRST has taught me how to be a leader, a role model, and a citizen. I have learned how to give back to my community and treat people with gracious professionalism. FIRST helps young minds find their passion, learn new trades, and develop their character. When I graduate high school, I plan to come back and help out the team."

-Zach Kahn, Team Member/Building President

