

2011  
Team 2996 Chairman's Essay

Coronado's FIRST Robotics Team 2996 recognizes that FIRST is about more than just building a robot; it is about building character. Dean Kamen spreads the love of science and technology to today's youth and we are certainly caught up in that spirit. Following his example, we strive to stimulate knowledge and excitement for science among younger children. Cougars Gone Wired had the great fortune to experience the spirit of FIRST during our rookie year when we were befriended by generous veteran teams such as 399 and 662. With their help we were successful at the Denver Regional and attended Nationals. Upon witnessing the enthusiasm that all teams brought to the competition, we were each inspired to make FIRST part of our everyday lives. **As a team, we are making every effort to break down the barriers of typical stereotypes in our culture as ambassadors for FIRST.**

FIRST feeds our love for science and technology; it is a passion that we want to share with others. No other program could provide such an excellent real-world engineering experience. We run our completely student-centered team like a professional engineering company. We have a CEO, a CFO, seven VP's who run technical sub-teams and five VP's who run business teams. To fill these positions, applicants submit resumes and are interviewed by a panel of mentors, modeling the business world. Each student is a member of both a business and a technical team, breaking down the barrier that separates "Techies" and "Fuzzies". This student-centered paradigm continues in the design and manufacture of the robot. A visitor to our shop would see student led teams' progress from brainstorming to design reviews to CADing to building and finally testing. We work thirty hours a week during build-season: almost a full time job! Outside build season, we continue to meet together weekly. Even during the summer we meet, sometimes hosting a movie night or a friendly game of Ultimate Frisbee. We enjoy each other's company and have a blast. Our alumni come back often. **Over the past three years our team has broken down the barriers between students to become more than a team—we've become a family.**

Another barrier that has been torn down is the gender barrier. Our leadership consists of six girls and six boys. Even our CEO is female! Both sexes get their hands dirty building the robot. Those who initially didn't want anything to do with the robot make indispensable contributions, and by season's end, most become interested in engineering and even enroll and excel in engineering classes. Slowly but surely, barriers are crumbling in Team 2996's shop.

**No wall of rivalry exists between our team and other FIRST teams.** We are committed to the values of "coopertition" and gracious professionalism. We work side by side with other teams so that everyone can be successful. In our rookie year, Team 662 gave us a starting push and unselfishly offered their advice and expertise. Other FIRST teams lent us batteries and offered ideas and programs, helping us to win the Rookie All-Star and three other awards including Regional Champions. Our second year, we attended two regional events: Kansas City and Denver. After Kansas City, we hosted a Strategy Conference and invited teams in our area to dinner, where we shared everything we learned to improve all of the attending teams' performances in Denver. We are now helping Team 662 with their Minibot. Although we compete with each other, cooperation is at the top of our priority list. Our goal is not only to build the best robot, but to assist other teams in their quest for success. Our most recent effort to

unite other teams is by hosting a Sea Perch underwater competition on Saturday, May 7<sup>th</sup> 2011. We invited all FIRST teams in our area to enjoy the game and become equipped to host a similar event for middle school students. Each team will build an underwater motorized PVC rover to complete obstacle courses. This will help us bond with other teams and spread the FIRST message. **The barrier of rivalry does not exist in FIRST, only the drive to work together to complete our mission.**

Around the city, people are getting used to seeing a bunch of teenagers wearing bright yellow shirts and demonstrating a robot. **We are breaking out into the community, reaching out to everyone, especially the youngest.** We serve and teach our community during festivals such as "Cool Science" and the "What If? Festival" during September 2010. Not only do we work with science linked activities, but we also are involved with the Heart Walk (June 12, 2010), Race for the Cure (August 18, 2010), Stamp Out Hunger (May 8, 2010), and the Rodeo Parade (July 13, 2010). We even hosted a fundraising evening at Chick-Fil-A. Our members mentor three FLL teams: Galileo, Jenkins, and West middle schools and also started an FTC team at Coronado. We always show up in force to volunteer at local FLL events, like our district scrimmage at Russell Middle School on October 30, 2010. We helped with the regional event at UCCS on November 20, 2010 by making schedules, building the playing fields, and staffing the event. This summer, we are thrilled to be receiving funding from the Air Force Academy to present a city-wide camp that will reach all middle school students in the Pikes Peak region. We are doing everything we can to share our excitement for science and to impact our community in a positive way. We were the only robotics team invited to the UCCS "Cool Science Festival". Manning a booth for 8 hours in the September sun is not something easily forgotten. We set up an obstacle course, and offered everyone the chance to drive the robot. This event attracted 100's of kids. The joy on their faces while holding the controller really inspired us. We knew that they wouldn't fail to remember the chance they had to drive a robot the size of themselves. We hope this experience will ignite a passion for science and technology as we continue to make young kids our main priority. **We don't believe in barriers that prevent young children from experiencing technology FIRSThand.**

**The "Age Barrier" is usually avoided by teens, but we are filling in the generation gap.** We revere and appreciate our sponsors and mentors. Yet while we respect them, we have learned to relate to them. In order to find sponsors, our presentation team works year round. Our CFO arranges presentations with companies in the community, and then a select team gives each company a rehearsed formal presentation highlighting sponsorship opportunities. We also have an award winning website through which some of our mentors actually found us. Our mentors work hard to introduce the team to various companies and organizations that have become part of our 14 team sponsors. These include NAWIC (National Association of Women In Construction), Lockheed Martin, Honeywell, Aeroflex, Olson Plumbing, Agilent, and many more. We are especially thrilled that we can submit our CAD this year thanks to a mentor who partnered with his company to provide us with a computer that can handle the complexity of the file! Our relationship with our mentors and sponsors doesn't stop at the end of build season. One sponsor, Fastenal, asked for a film of our build session for a commercial. Also, Vertec has interfaced directly with team members and given them first-hand access to their fabrication facilities. NAWIC invited us to drive our robot in the "Pikes Peak or Bust Rodeo Parade" where we spread our name and our cause among a normally unreached part of our community. Our

team is destroying popular perceptions of what teenagers are capable of accomplishing. **We truly have a strong relationship with our sponsors and mentors and, together, we break down the walls between teens and adults, students and professionals -energizing everyone who loves technology.**

At Coronado High School, we are proud to say that everyone knows about Team 2996. Three years ago, before Mr. McLean began a FIRST team, few students had heard about FIRST Robotics. To put it simply, students built barriers amongst themselves, forcing the cool kids to go out for football and the nerds to join chess club. Although engineering teachers had attempted to snag more diverse students into their classes, the "white male nerd" consistently made up ninety-five percent of engineering courses at school. After our FIRST team earned a place at the National Competition in Atlanta, however, we started demonstrating our robot at sports assemblies, allowing us to reach the entire student body. We strive to destroy the barriers between age-old stereotypes, widening the diversity of interest for science and technology by participating in school and district-wide events. We have enjoyed partnering with Coronado's art students to build floats for our homecoming parade, and even modified our robot to hand out candy to young viewers. Around campus, we enjoy educating audiences about our robot, picking up trash around school grounds, and promoting team-made footage on Coronado's weekly TV show, KUGR TV. **With the support of the student body, team 2996 will continue to break down the barriers between typical teenage cliques.**

The impact FIRST has had on Coronado's students, mentors, sponsors, and community is huge, but it pales in comparison to the impact it will have in the future. We will continue to set an example for other teams to follow in our organization, our work ethic and our service. Our team has created a ripple of excitement and impact for science in our school and our community, and we intend to create a tidal wave as we grow. We believe that the key to spreading excitement for math and engineering lies in the hearts of the children, so we will continue to reach out to as many as possible in as many ways as possible. With our mentors and sponsors constantly behind us, and using every avenue of communication, we will achieve these goals and bust through the barriers to reach everyone with our excitement about FIRST.