

## Austin Cans—Chairman's Submission

### FIRST Spreads fast in Tin Can Land

When starting a robotics team, our mentors and students have had a very rough time raising money, obtaining a facility and getting the proper tools. Despite all of these barriers, the team has been able to accumulate a wealth of knowledge that goes far beyond knowing the difference between an 8-32 and a 1/4-20 machine screw. The students and mentors have gained tremendous insight into the world of starting a successful team. The experience of starting an organization will stick with all of the students more than would a few trivial numbers or a skill like using a miter saw. With a fairly young and inexperienced mentoring squad, the students had to rise up into leadership in their rookie year, regardless of what year in high school. Some of the students knew no one on the team before the team came together, the students just knew they really wanted to be part of

FIRST. The robotics team first began with the Capitol BEST Robotics Competition. BEST gave the team a great primer session to discover the design process for robot building and the formula for team building. With BEST, the team started with a class of only seniors brought together by the teacher, John Sperry. The team overcame many hurdles in design, coordinating schedules and establishing a solid outreach program for others to also get involved with robotics competitions. The austin CANS students and mentors learned through practice, when scheduling and holding demonstration days at the UT-Austin Edison Lecture Series in addition to presentations to six elementary and middle schools. Eventually the team membership forms reached over eighty students and Mr. Sperry's classroom was completely full with stu-

dents. That's when we realized, we might need a larger facility and a lot more mentors. There were only a couple months between the BEST and FIRST seasons and the team had a lot of pressure to get more members affiliated with FIRST, programming and CAD design before kickoff. The team held training sessions to introduce programming using Vex robotics kits and a six hour Autodesk Inventor training course at UT-Austin for all of the students on the team.



Electrical Team hard at work

### New Pickle Research Facility

The season quickly started and we had a rough time getting all the members to attend the kickoff due to school session timing; however, we found a projector and got the team together to watch the kickoff and decide on a overall schedule to determine what needed to be done in the six weeks to come. Interestingly enough, as

the season progressed, we saw freshmen quickly fall into leadership positions due to dedication and willingness to learn the vast amount of FIRST material. In about the third week, we miraculously obtained a larger facility at Pickle Research Center just down the road from the high school. There we were able to

setup a full size practice course with a complete rack and test the robot drive train which had been finished by the second week. Once we reached the 3 week milestone, the team had a much more secure feeling of design, FIRST terminology and troubleshooting skills.

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#### Tin Cans Impacts

"Through this whole process we've made more than friends; we've made colleagues. We think differently now. When each of us graduate we will take with us the experience and spirit of FIRST, list of critical features, teamwork, collaboration and ingenuity. To us FIRST is not a robotics competition, it's a philosophy"

- Andrew Ciminio—

Student Admin Group Lead



## Tin Cans—UT-Austin set the Role Model Rookie

We hope many other rookie teams can have the opportunity and support we had in building our team. In Austin, the only other team close enough to provide help was Team 418, LASA Robotics. They helped with part swaps and helpful emails but as far as finding dedicated mentors to help guide the team, we were on our own. The UT-Austin Robotics & Automation Society helped the team with tools, website, funding and mentors. We found six UT-Austin student mentors, most of whom had previous FIRST experience. Our team feels that more rookies should have an opportunity to have the same support from UT-Austin that our group received. Therefore, our group has established the FIRSTaustin.org program to help spread the word and assistance of UT-Austin to the surrounding Central Texas area. We hope to expand out to more Austin I.S.D. schools with VEX and FRC. We have established a contact network with fellow Austin I.S.D. schools through the Capitol BEST program. The greatest challenge for rookie teams will be funding. Our website shows many ways to raise money in Austin and provides samples of our grant applications and funding requests. Many of the UT-Austin mentors are willing and ready to assist other schools which we successfully demonstrated at McCallum and Crockett high school for BEST Robotics.



### First Austin Program

FIRST Austin is a ground breaking program that will help spread the FIRST involvement in many surrounding Austin high schools. Through the FIRST Austin program we provide documents and logs of Anderson High School's foray into one the greatest robotics teams in Austin. We feel Anderson is one of the best model schools because the students had no prior robotics experience and no formal training in tools or technology clubs. Therefore other schools can learn from Anderson's lessons and hopefully be guided by UT-Austin student mentors along the way. We feel college student mentors are the best way to communicate to younger students rather than seasoned engineers. Students have an easier time working with college students as fellow peers. In addition we hope our FIRST Austin site provides a unique perspective on how to raise money in the Austin area. Hopefully many parallels can be drawn to other cities and other programs involving universities and fellow high schools until it reaches a national scale.

"Our team is not made up of one kid who has built a formal robot before 2006. Our first competition was the 2006 BEST competition, when we were all oblivious to the difference between a nut and a bolt, a drill press and a miter saw. Now, some man at Home Depot can ask if we want a box of 1.5 inch eight-thirty-twos, flat or mushroom head, and we can intelligently say, "mushroom, of course." But possibly more satisfying to us is that several middle schools, elementary schools, and nearly half the student and teacher population in Anderson High School can say what FIRST robotics is and maybe even what the goal of this specific competition is."

- Kapil Sexana, Senior Student Leader

Although the robot will soon be on its way to Houston, it has probably traveled more miles on the roads of Austin already. Promoting the message of FIRST and robotics in general throughout Austin schools, Robot 2158 has seen five or six different schools all over Austin. Despite robotics having been in Austin for many years now, our team was surprised that no other team has yet to fully form an Austin robotics community such as Houston Robotics. In the spirit of FIRST, we have started this community, calling it FIRST Austin.

## Robotics Recruiting and Showcase at the High School

Besides many robot demonstrations at Anderson High School, our team has reached out to many elementary and middle schools including Hill Elementary, Davis Elementary, Kealing Middle School, Canyon Vista Middle School, Laurel Mountain Elementary, and Murchison Middle School (see the photo gallery for more ). What really sets apart our rookie team from more experienced teams is the fact that we decided to interrupt our build

season with our 2007 robot for numerous demonstrations at middle schools. We have also sent letters out to local state representatives per Dean's Homework. In the letters we discussed the opportunity of creating legislation to create an extracurricular grant for high schools around Austin to fund robotics and science related programs. Luckily we did receive a response from representative Donna Howard about her support for the FIRST pro-

gram. However due to previous engagements she was not able to make our invitation to Lone Star Regional, more details are posted on the [forums.usfirst.org](http://forums.usfirst.org) site. The Austin CANS will continue to reach out to politicians here in Austin to eventually convince the state the importance of FIRST robotics.

## Robot Demonstration at Middle Schools and FLL Regional

Austin Cans in conjunction with their sponsors at UT-Austin helped develop the framework for the FLL Central Texas Regional at the UT-Austin campus. The team created [centraltexasfll.org](http://centraltexasfll.org) website and organized the pit and stadium areas.

## Public and Community Involvement at Edison and Beyond

Anderson and UT-Austin demonstrated the robot to other high schools as part of the Edison Lecture Series hosted at the UT-Austin Campus. Edison Lecture involves high schools from all around the central Texas region.

"The team is more like a family now, with the mentors as our big brothers and sisters. Several parents have donated money and T-shirt sales have provided us with financial stability. In essence, FIRST is rolling in Anderson and FIRST Austin will bring robotics to Austin for the first time with all the excitement it deserves. ."

- Kapil Sexana, Senior Student Leader





**2158 Austin Cans  
Anderson High**

E-mail:

**ausTINCANS.2158@gmail.com**

Teacher: John Sperry

Phone : 512-695-0745

“Our team cannot claim to a past. We are rookies. But the freshmen, sophomores, and junior members all played a crucial part in building the robot.”

[www.andersonrobotics.com](http://www.andersonrobotics.com)

AusTin Cans 2158 from Anderson Robotics mentored by IEEE Robotics & Automation Society at UT-Austin started in Fall of 2006 with the BEST Robotics competition. Anderson High School has no tools or classes related to robotics, therefore the team must work off the resources provided by the UT-Austin Students. The team has developed into a fast paced community outreach organization that demos their robot to any audience at anytime of the day. The Tin Cans will find every avenue possible to help spread the FIRST message to the community through the FIRSTaustin.org program. Feel free to check out our website and contact info if you are interested in learning more about our organization.

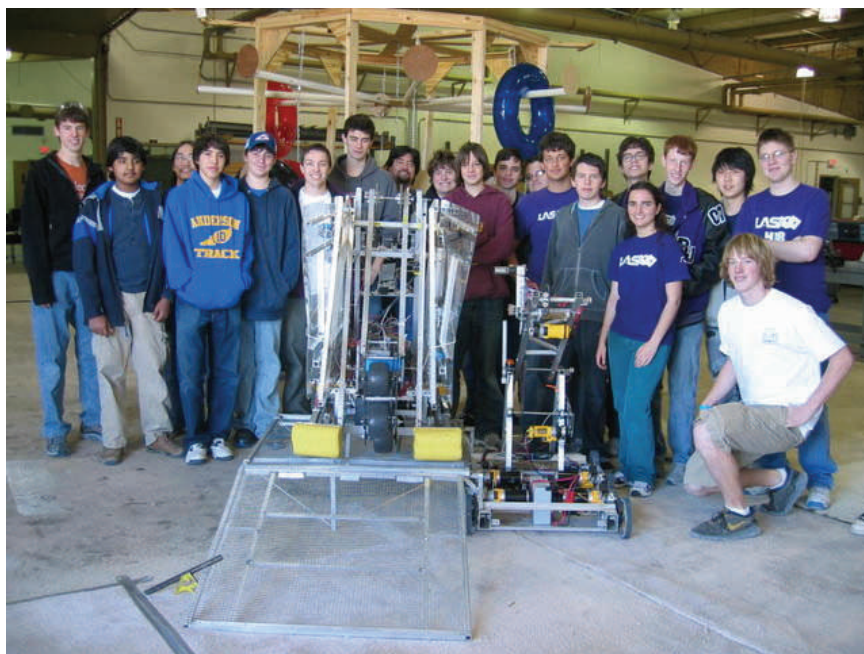


# AusTin Cans



**Keeping the Bonds Strong throughout the Year**

Our year round partnership started when the team was formed for BEST Robotics. The teacher, John Sperry, the UT-Austin Student mentors and the students have become very close through the building weeks. The relationship between the UT-Austin students and Anderson high School students will stay very strong especially if many of the graduating seniors become UT-Austin Students. Many of the freshmen parents have risen up as well to become major supporters of the team.



Students working hard in the Mini Meet