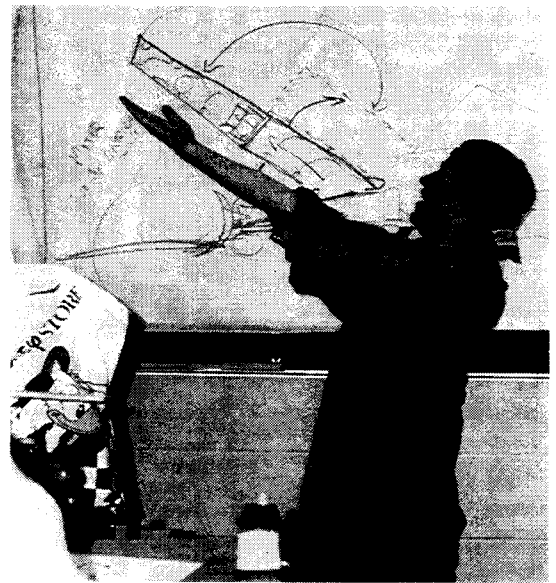
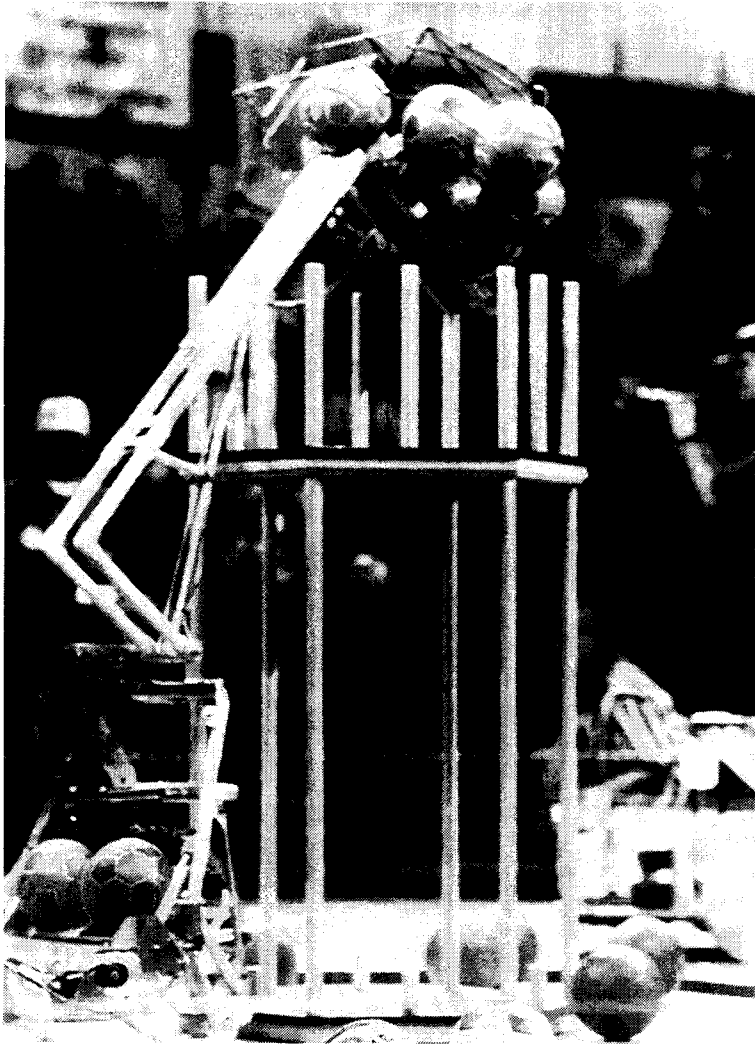
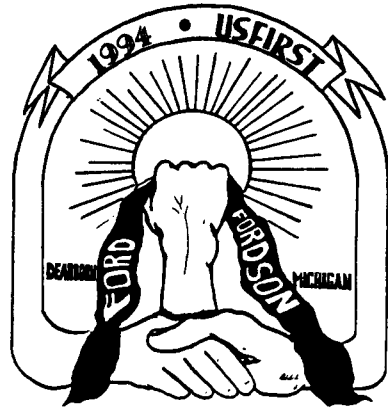
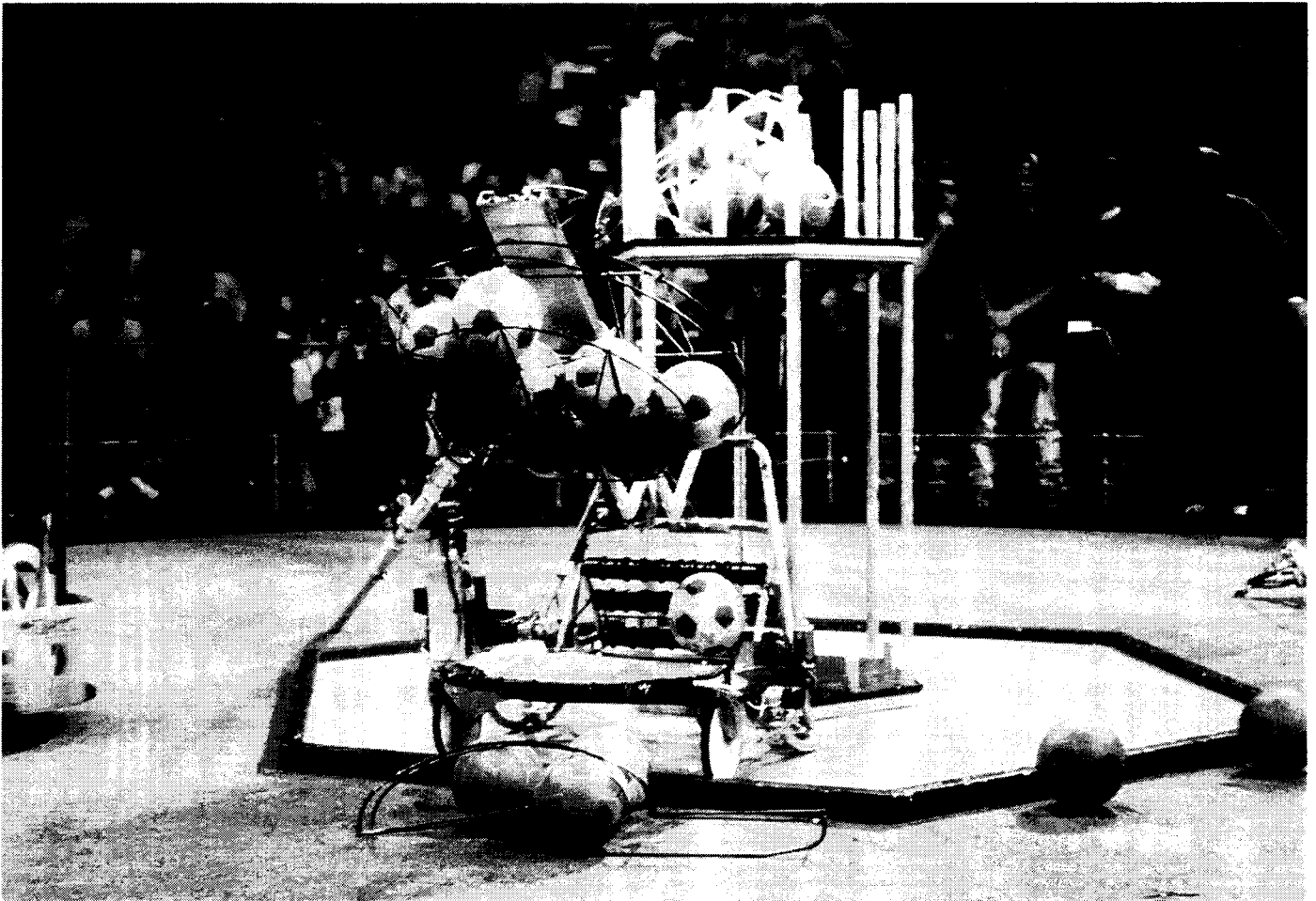


The Tractors

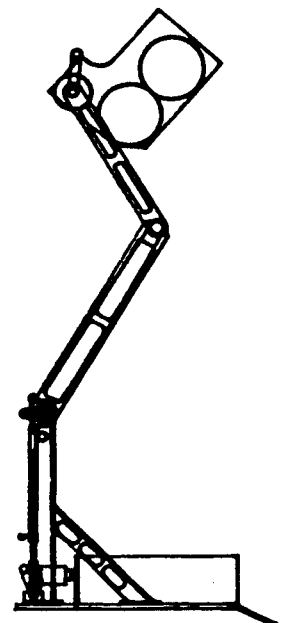
Ford Motor Company Fordson High School
Dearborn, Michigan





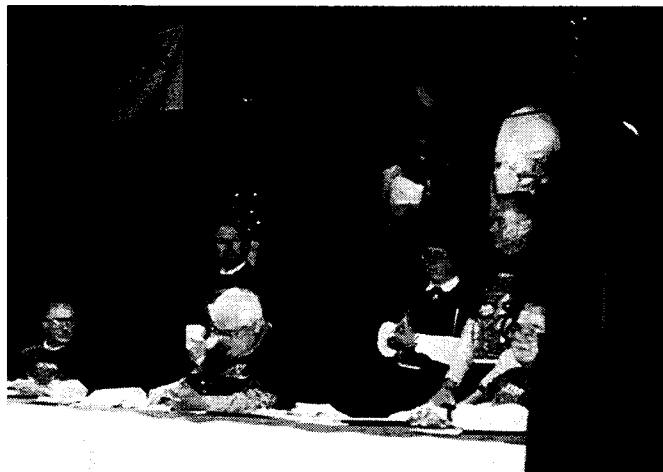
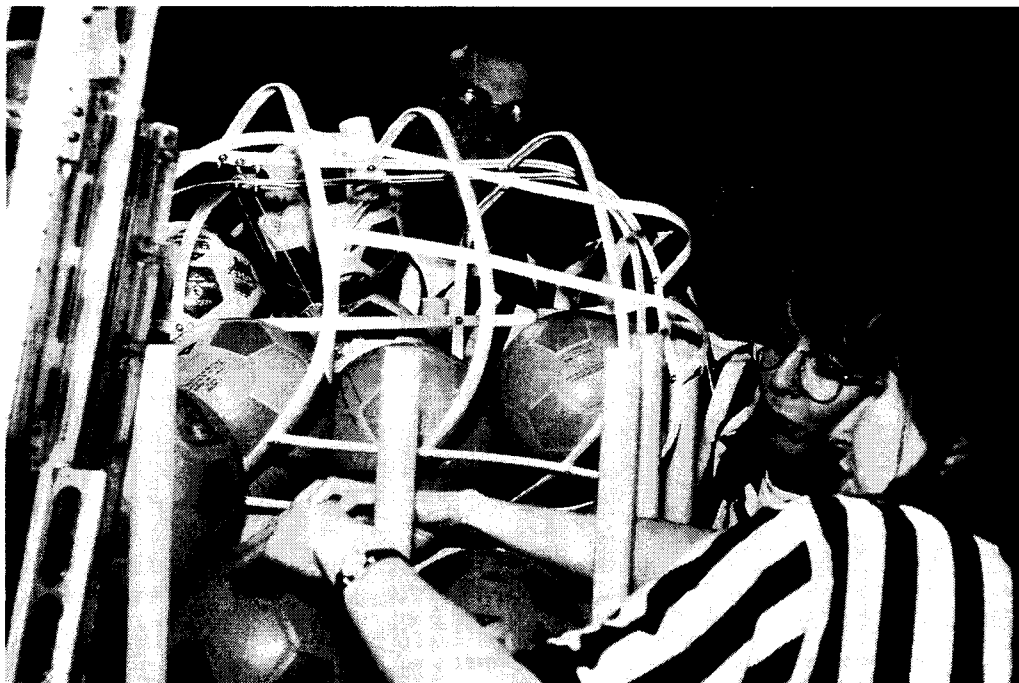
We're Baaaack!

This is the second year of our participation in U.S. FIRST, and we dedicated ourselves to expanding the quality and scope of our involvement. 'The Tractors began turning their wheels' in October to hone our creative and teamworking skills in preparation for this year's event, holding mini-competitions after school each week. It is estimated that through our partnership efforts, more than 4,600 hours of personal time was contributed this year. Students organized and accomplished a variety of special support activities including a school-wide fund-raiser and a series of 5 U.S. FIRST awareness meetings which our team initiated with eighth graders at Lowrey and Woodworth Middle Schools. A Parents Orientation Meeting was attended by more than 60 parents and other family members.



Judges, Referees

"How many Dartmouth
Thayer School of
Engineering Ref's does
it take to count to 12?"



"Thank you for including me as a judge for the 1994 U.S. FIRST Competition. It was, without a doubt, one of the most exciting activities in which I have been engaged. ...I look forward to working with you in the future to continue this important effort."

*Dr. Jane Stutsman, Deputy
Assistant Director
National Science Foundation*

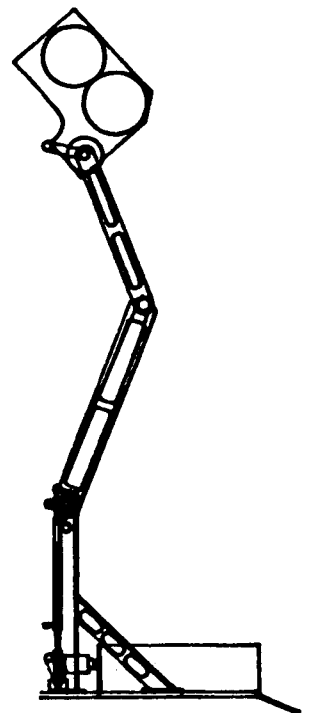
"The thrill of the kids participating in this is just unbelievable. They're engaged. They're involved. They're thinking. They're working together as a team."
*Roland Schmitt, President Emeritus
Rensselaer Polytechnic Institute*

Staff

"So, if we all head in that direction, maybe we can get out of here without anyone noticing!"



DEKA Research
& Development



The Lone Star Stingers

Texas Instruments, Inc. Denison High School
Denison, Texas

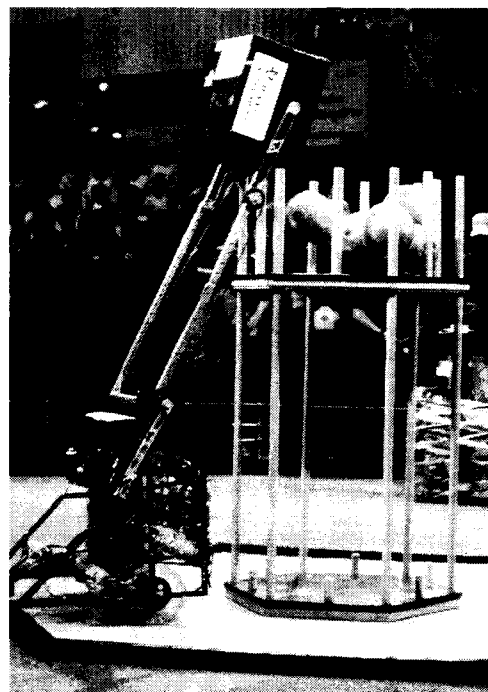
National Finalists

Best Offensive Round Award

DHS Second in Nation!

The Denison Herald- Sun., Feb. 27, 1994

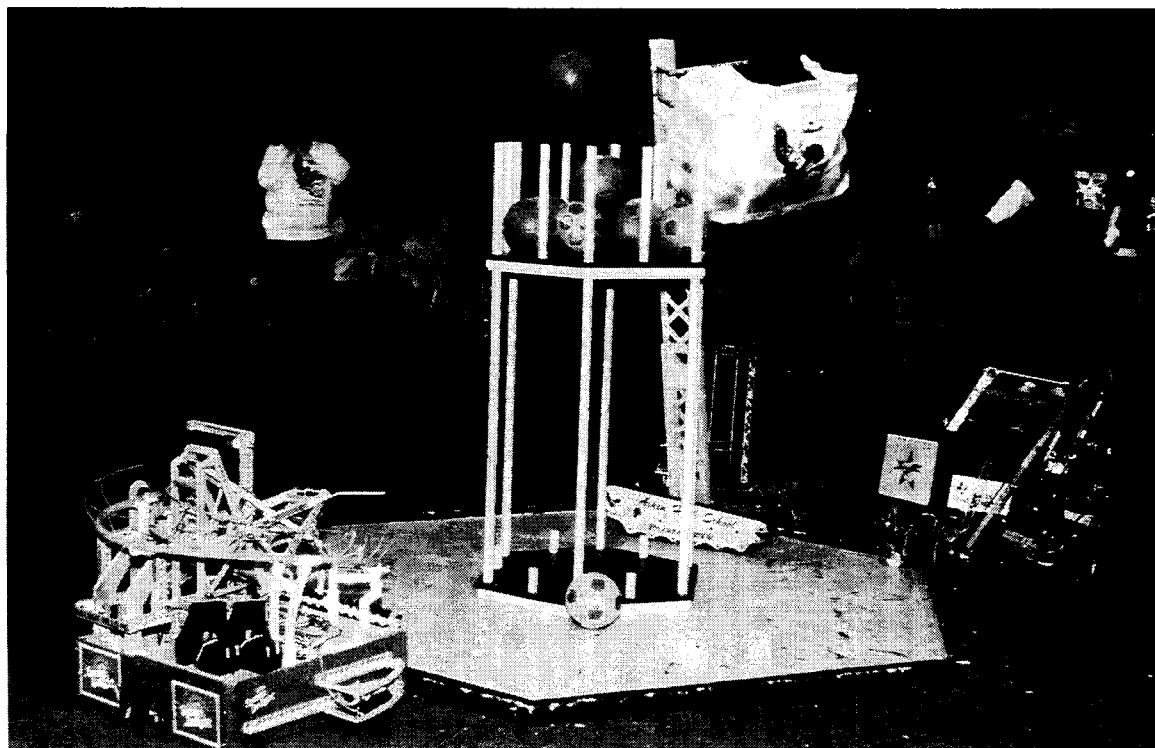
“We’re very proud of the kids and the job they did,” said DHS *Principal Robert Mears* by telephone from Nashua on Saturday. “This is a great representation of our school and an honor for Denison and our state. It was a pleasure to see the kids’ hard work pay off so well.”

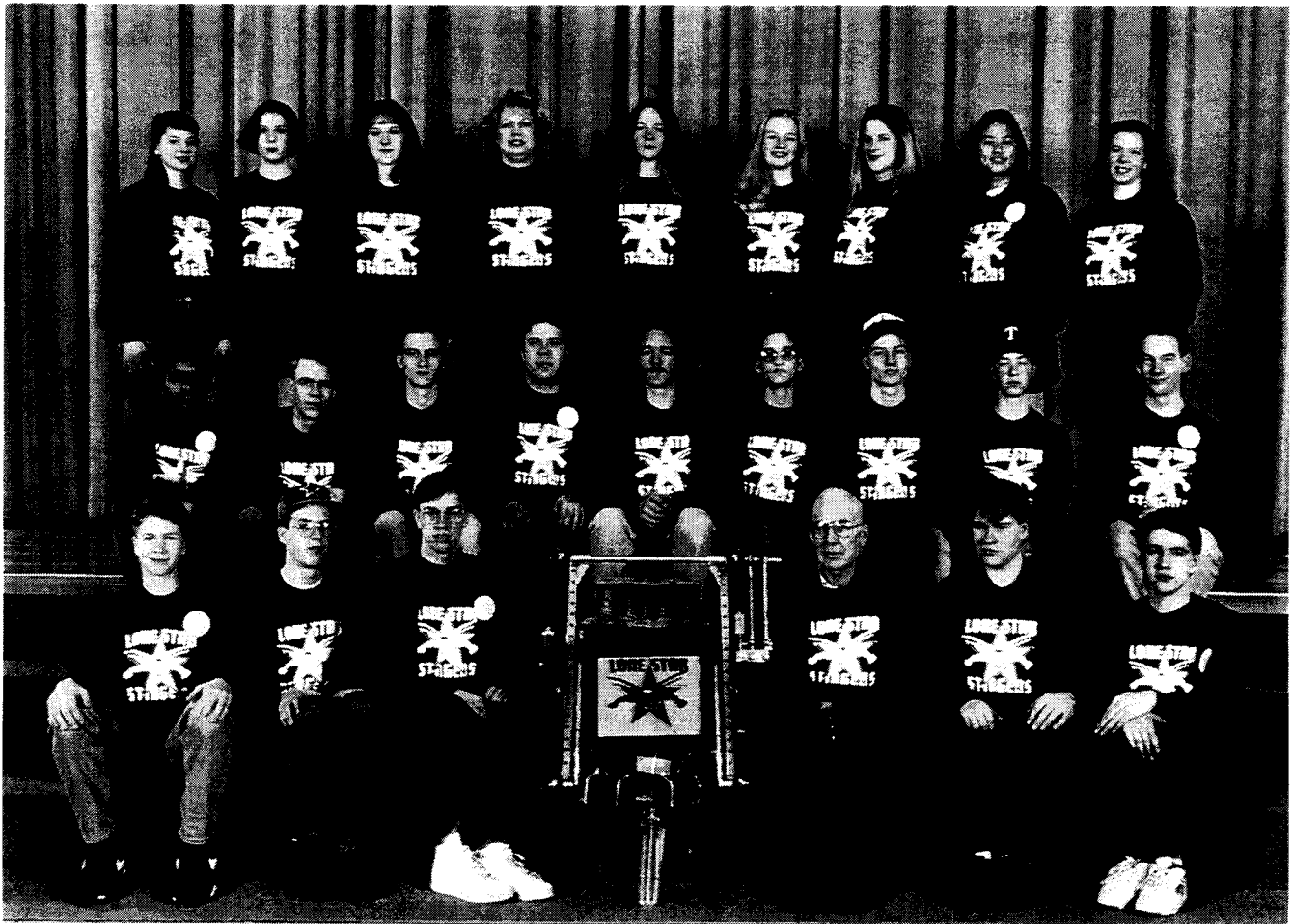


The Denison Herald-Wed., Mar. 30, 1994

“There were teams from all over the nation cheering for us: teams from Michigan, teams from Illinois. They were all cheering for Denison, Texas. It was so awesome!”

Chris Mahaffey, Senior, DHS





These Lone Star Stingers placed second to Lockheed Sanders/Nashua High School in the third round, and second to Procter & Gamble/Walnut Hills High School in the final elimination rounds to stay alive and reach the semifinals. The Stingers then defeated the magnificent 'Robocolt', Arizona's Honeywell/Cortez High School entry, in two straight games to reach the finals and set up a rematch with the deadly accurate Procter & Gamble/Walnut Hills creation. The Champion Ball'ed Eagles edged the Stingers, 36-31 and 34-29, to capture the title.

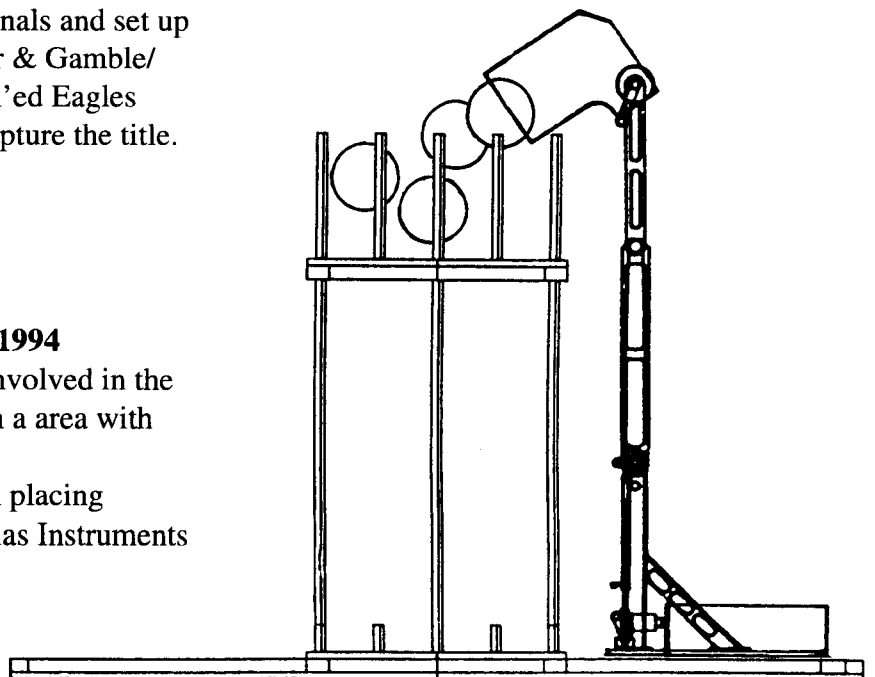
Letter to the editor:

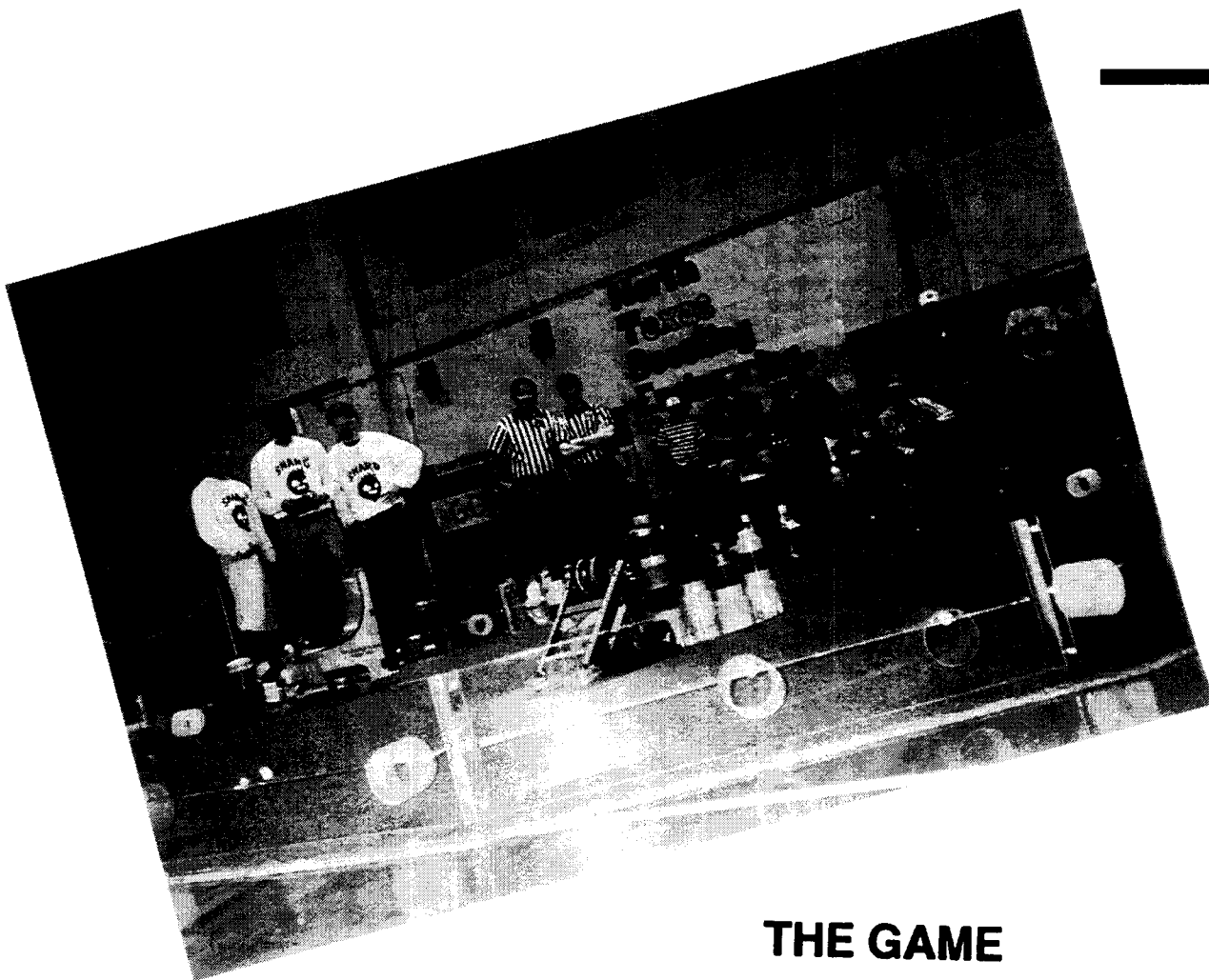
The Denison Herald-Sunday, March 6, 1994

"Even though I didn't have any children involved in the project, I feel very fortunate to be living in a area with such dedicated teachers.

Congratulations, Denison High School, on placing second in the nation, and thank you to Texas Instruments for sponsoring this!"

Debbie Blackwell, Denison





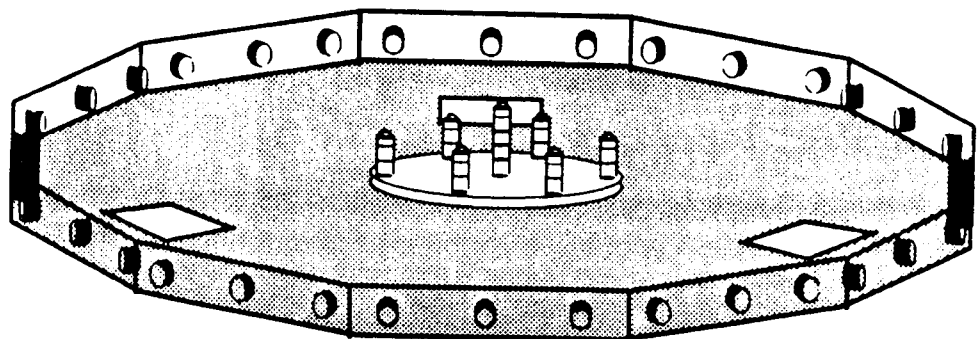
THE GAME

Competitors attempt to collect their colored PVC rings from the perimeter of the playing field, depositing them in the scoring area and defending them, all in three minutes. Machines are limited to 24 lbs. of weight and must fit in a 24 inch per side cube.

Points are based on the position of the rings at the end of the match. Rings on starting pegs, touching carpet, or out of the field, score no game points. Rings on/over raised platform but not in a machine or detached container, scores one Game point. Rings on the six outer posts score additional points if color of ring matches color on top of post; only one game point is scored if color of the ring does not match the color on top of post. One point is scored for a ring placed anywhere on the cake. The center post scores game points and is open to all teams.

Scoring Zones

	Center Post	Short Post
Top:	2	0
	4	0
	6	2
Bottom:	8	4



NT BEST (North Texas Boosting Engineering Science and Technology) was formed by the Texas Instruments, Sherman Site technical council. A committee created a game called PVC Insanity. This design contest would be held for all 13 of the local high schools with the winner being the Texas Instrument sponsored team to U.S. FIRST Nationals in 1994.

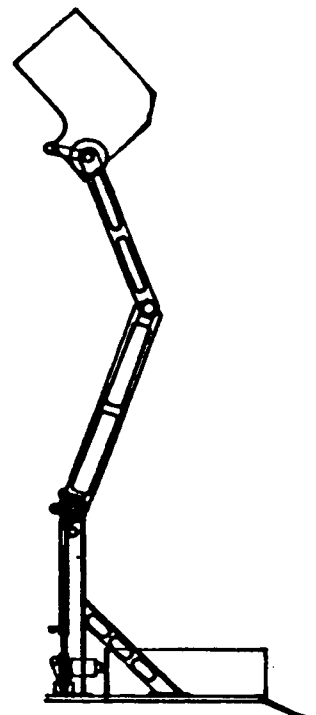


Like U.S. FIRST, the students had six weeks from start to finish. Without expectation of TI sponsorship to Nationals, a high school from San Antonio (500 miles away), having trouble securing funding for a U.S. FIRST team, requested and received the go ahead to enter a PVC Insanity team. Just before the competition, a practice session was set up at a local mall providing visibility for the effort and a preview glimpse at the other teams. Several inquiries of interest came from those not yet involved.

Sherman High and Denison High ended up head-to-head in the finals. After some tough struggles, Denison emerged as the winner. TI would sponsor Denison. General Telephone and Electronics (GTE) was so impressed with the contest that they stepped forward and agreed to sponsor Sherman. GTE did not have enough engineers on site to support the team, so TI supplied engineers to coach.

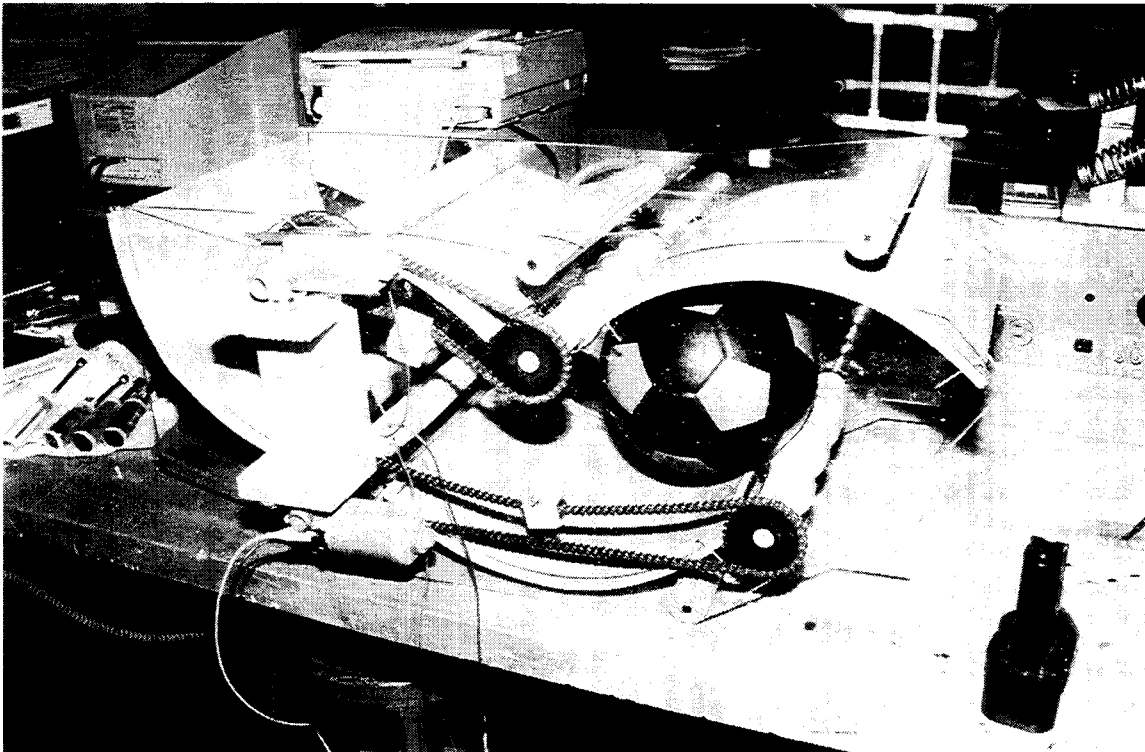
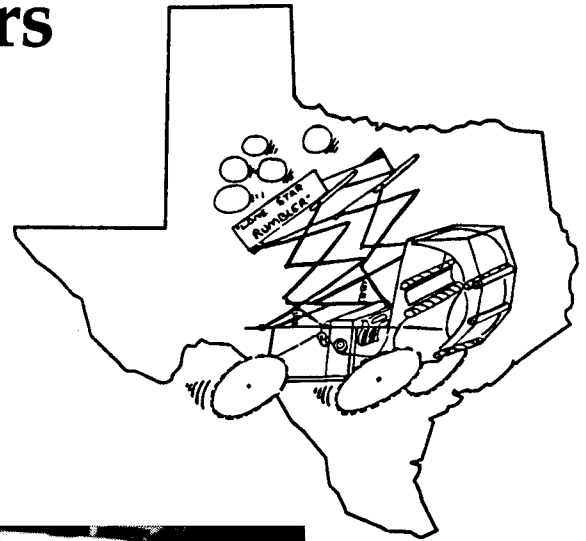
NT Best is expecting 24 teams this year including some southern Oklahoma schools. The San Antonio team enjoyed the game so much, they now have 6 teams ready to compete.

After PVC Insanity was history, the NT best team decided to donate the playing field to other interested parties. PVC Insanity will now travel and continue providing the experience of a design contest to students.

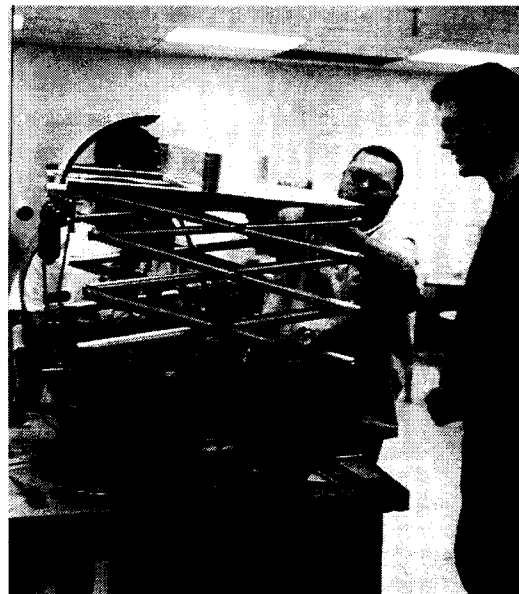


The Lone Star Rumlbers

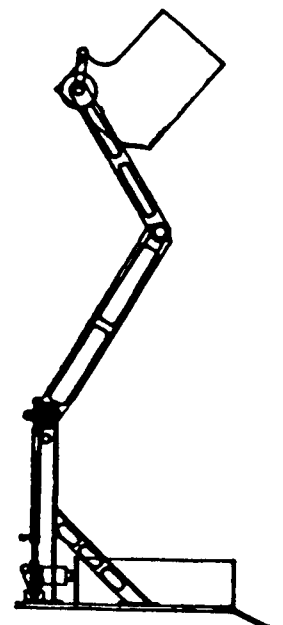
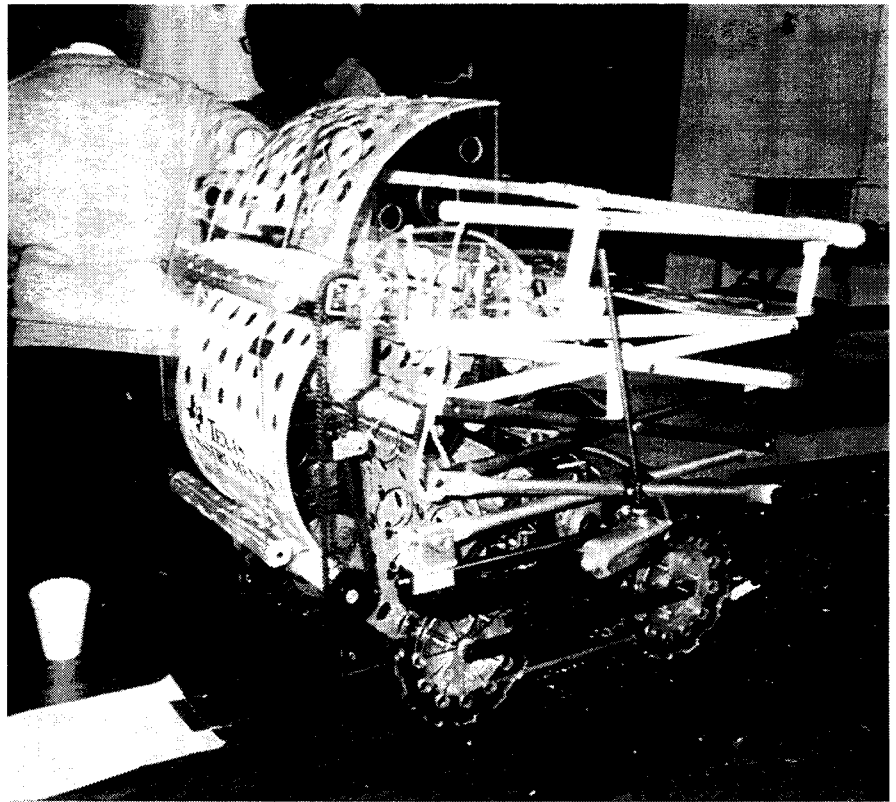
General Telephone & Electronics Texas Instruments
Sherman High School Sherman, Texas



The Lone Star Rumlbers are composed of 18 students and 5 GTE/Texas Instruments engineers. Student members were nominated by various teachers throughout Sherman High School. Throughout the weeks of preparation, teamwork was always an important factor in accomplishing goals. The engineers were very enthusiastic about working with and instructing their students, just as the students were eager to learn and participate. The Rumbler students took time to make special presentations to large industries and organizations, making it possible for every team member to attend the National U.S. FIRST 'Tower Power' Competition.



The Sherman High School Team placed second in the North Texas Best PVC Insanity Competition thus earning their spot in the national 'Tower Power' spotlight of U.S. FIRST. Trouble in early rounds at the "Tower" caused them to be eliminated, but it did not spoil the experience. No longer needing to compete against their NT BEST rivals, Lone Star Rumbler students and advisors took pride in the accomplishments of the Lone Star Stingers, forming a strong bond between them.



Science KATS

Delco Electronics Corporation Kokomo High School
Kokomo, Indiana



Chairman's Award Finalist



PROCLAMATION

WHEREAS, the future of our democracy and the health of our economy depend on whether our children can compete technologically worldwide; and

WHEREAS, Kokomo, also known as the "City of Firsts", has a tradition of leadership in technical involvement; and

WHEREAS, the DEKCS organization, which is an educational partnership between Delco Electronics and Kokomo-Center Schools, supports the U.S. FIRST (For Inspiration and Recognition of Science and Technology) competition because it promotes excellence beyond the classroom; and

WHEREAS, the Science-Tech Kats, represented by KHS drivers Jennifer Kunkle, Roy Griffin III and Lesley Roberts along with Extra-Mile Award winner George Drake, under the direction of Kokomo-Center officials Jim Tappan, Jack Davidson and Tim Railey; Delco Electronics engineers Bill Ramseyer, Max Davies, Tom Lewis, Howard Free and Elmer de Leon; and Delco Electronics skilled tradesmen Frank Robinette and Ron Moore, will take their "Katapult" to Nashua, New Hampshire, to represent the City of Kokomo and the State of Indiana in the U.S. FIRST "Tower Power" national competition February 24-26, 1994.

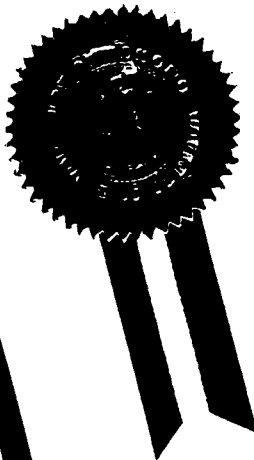
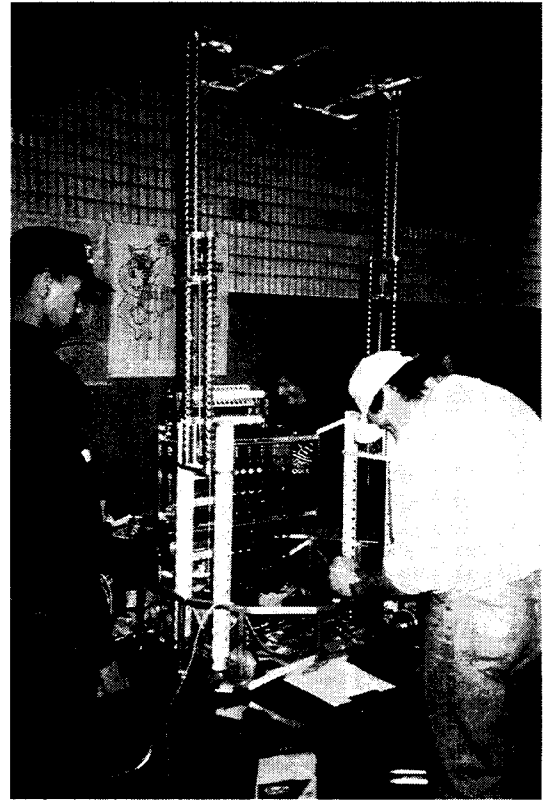
NOW THEREFORE, I, Robert Sargent, Mayor of the City of Kokomo, Indiana do now hereby proclaim February 24-26, 1994 as

TOWER POWER DAYS

in the City of Kokomo, and on behalf of the citizens of Kokomo, extend the thanks and best wishes of the community to those involved in the competition as they add to Kokomo's reputation of being in the forefront of technical achievement as the "City of Firsts."

IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the City of Kokomo, Indiana, this 15th day of February, 1994.

Robert Sargent
ROBERT SARGENT, MAYOR
CITY OF KOKOMO, INDIANA



"I am proud to be involved with U.S. FIRST for some personal reasons. I am proud of being employed by Delco Electronics for many years, and I am a proud graduate of Kokomo High School. It is nice to be able to give something back to my community and school in return for all they have done for me.

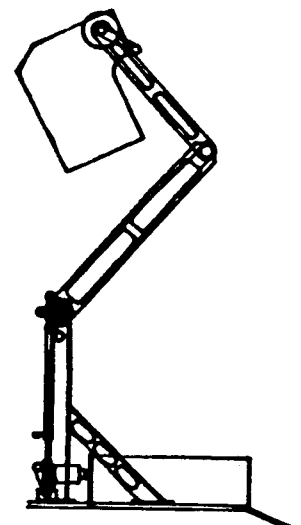
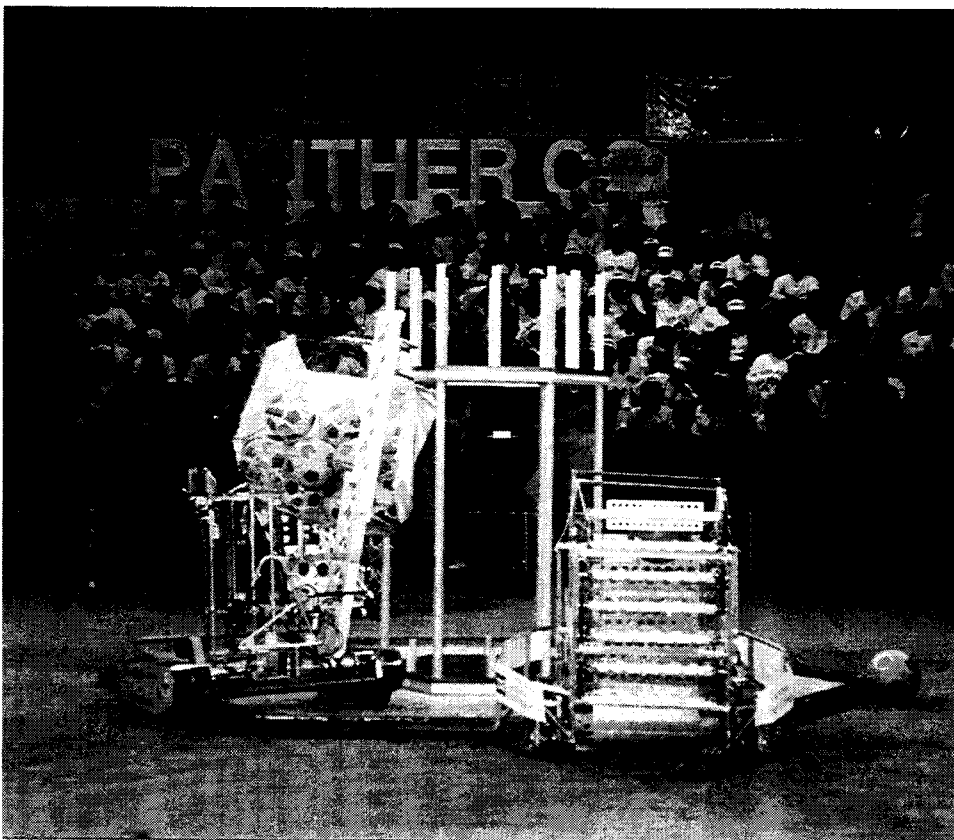
It is an honor to be welcomed into the classrooms and in a small way experience what our school teachers experience.

Like a farmer, U.S. FIRST has given me the opportunity to plant seeds. Some of the seeds are blooming already, some may not grow, but I firmly believe that this program will lead to a bountiful harvest.

Bill Ramseyer, Advanced Manufacturing Engineer

"The kids have already won. They're making new friends and have become a team. You can see lights in their eyes when they see something happen."

Max Davies, Engineer,



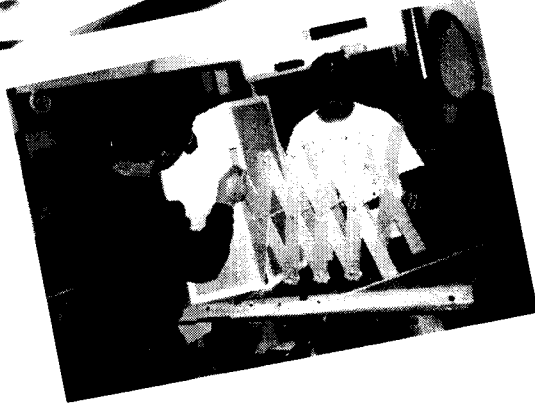
Gael Force

NYPRO, Inc. Clinton High School
Clinton, Massachusetts

DAILY ITEM



U.S. FIRST afforded us the opportunity to challenge the students' abilities...And their abilities challenged us!



"I have seen a mutual respect and understanding grow between the students and the engineers. The barriers between business and education have become doors."

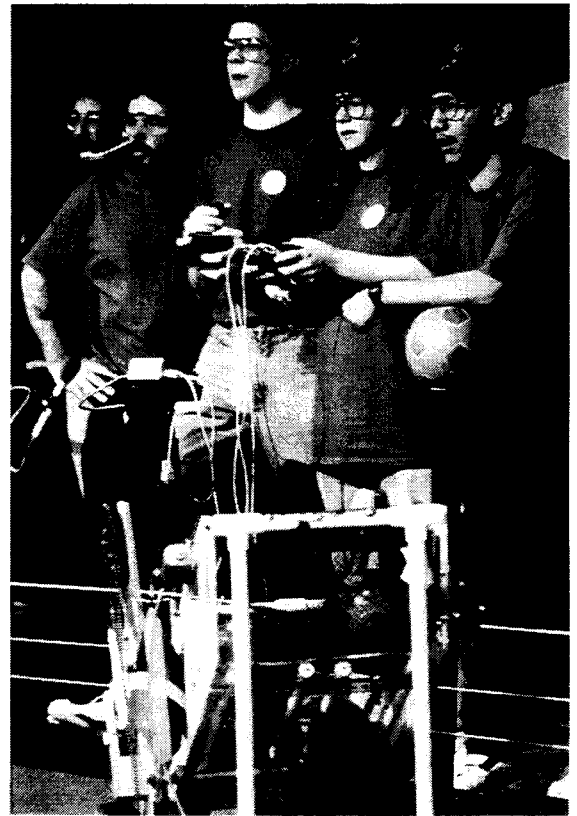
Sharon DiMeco, Secretary, C.H.S.

"The things I have learned and the people I have met have had a great impact on my views of the outside world. ...I never thought an engineer would listen to what students had to say, but I was wrong."

Jason Bailey, Student

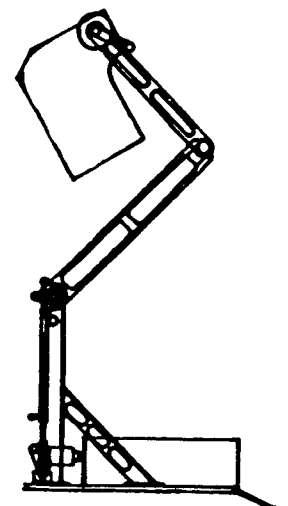
"The one thing I enjoyed most of all was that everyone's opinion was important. ...I learned that nobody is a nerd. Everybody has a special talent. They helped me seek an ability that I never knew I had..."

Albert Mercado, Student



"I feel that the U.S. FIRST program helps high school students meet new people. ...(It) isn't just for boys, but for girls also. ...Lisa Illuiano shows that women can make it in the modern world of today; she is the only woman engineer in Nypro. I hope to be the next."

Vivian Santiago, Student

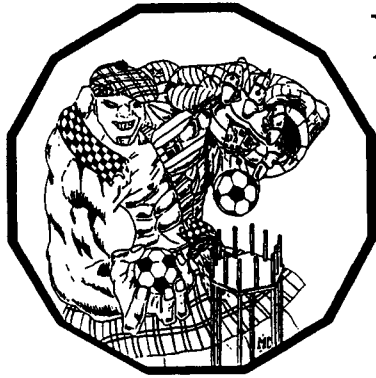


The HIGH-LANDers

NYNEX Corporation Somerville High School
Somerville, Massachusetts

Chairman's Award Finalist

Best Team Spirit Display Award



People who work with
their hands are laborers

People who work with
their hands and their
heads are crafts people

People who work with
their hands, their heads
and their hearts are
artists.

Special Needs students in the Building Maintenance Department painted the practice playing field built by the Carpentry and Metal Fab shops and erected it in the school's Atrium outside the gymnasium.



"The first time we rolled out the machine it was unbelievable. We couldn't believe we did this. We built it. Everyone was in awe."

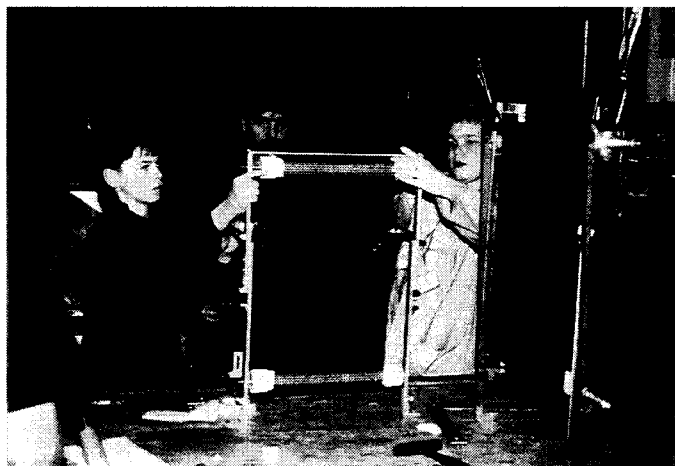
Bill Gianoukos, Student

"Almost anything is possible if you work at it and try it."

Katie Delaney, Student

"The teachers don't seem like teachers anymore. They seem more like students or people that you work with."

Mike Costa, Student



44 robots vie in national contest

Corporate sponsors, school teams design machines that teach the joy of science

By David C. Pugh
CONTRIBUTING REPORTER

NASHUA, N.H. - The competition was fierce and mechanical yesterday when 44 robots of all shapes and sizes battled it out for victory in a national competition designed to persuade students that science is fun.

But the robots did not come on their own for an afternoon of android Olympics at the third annual US First Tower Power robotics competition.

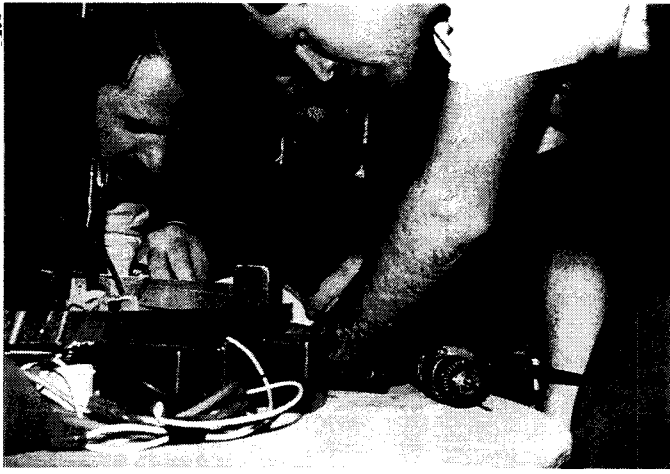
The robots were accompanied by some competitive humans. Teams of high school students representing 26 states worked with corporate sponsors for the past seven weeks to design and build a robot for the national competition at Nashua High School.

Behind the gym, in the cafeteria, was the heart of the competition, the pit room, where problems ranging from ordination to drive-trains were being solved by students and their professional partners at a quick rate so as not to fall out of the competition.

"We had to switch our wheel design to fit notched wheels, and when we did, we had to change the driver pins to account for more torque," said NYNEX/Somerville High team member Joe Porreca, while his teammates and professional engineers tuned their robot for an upcoming round. "It's been an incredible learning experience."

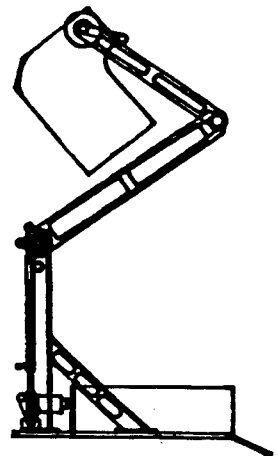
"They don't have enough time, information, resources, materials or money - now do it anyway. This is the real world of engineering."

Paul Mauriello, Engineer



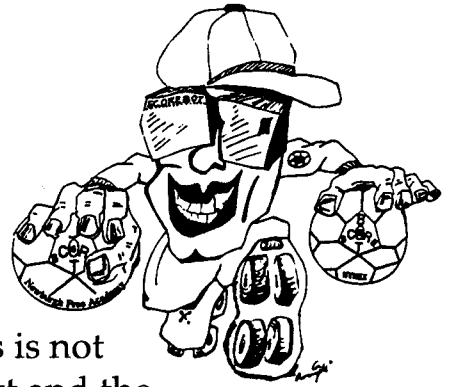
"More than 200 students of diverse backgrounds, interests and abilities took the opportunity to contribute in some way to this effort. The U.S. FIRST competition has planted 'seeds' of ideas with faculty, engineers and community volunteers for curriculum revision and future collaboration. There's a feeling of cooperation between the 'tech. ed.' kids and the kids on the college course. There's no more 'us and them,' they're a team."

Paul Mauriello, Engineer



SCOREBOT

NYNEX Corporation Newburgh Free Academy
Newburgh, New York



from Chairman's Award submission:

Like the quote says; 'The important thing in the Olympics is not winning but participating...' To feel like the mind, the heart and the body of the Olympian is quite an experience. Our 'SCOREBOT' team was like the Olympic Athletes who prepared under the most difficult weather conditions and completed our initial U.S. FIRST Competition. Even though we had many slippery starts and stops and didn't win, we are smitten from the competition.



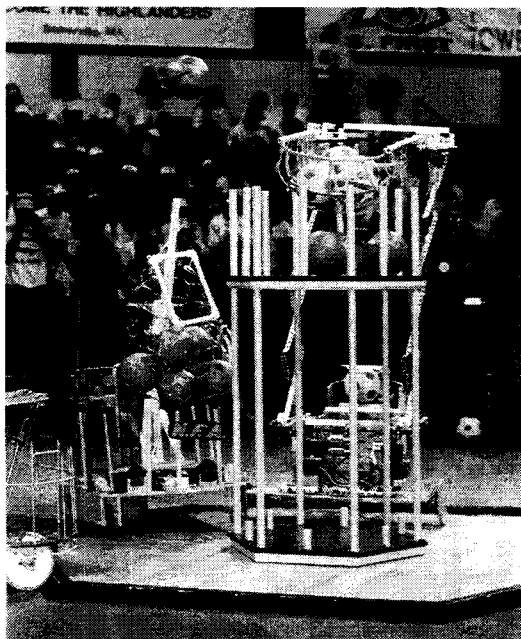
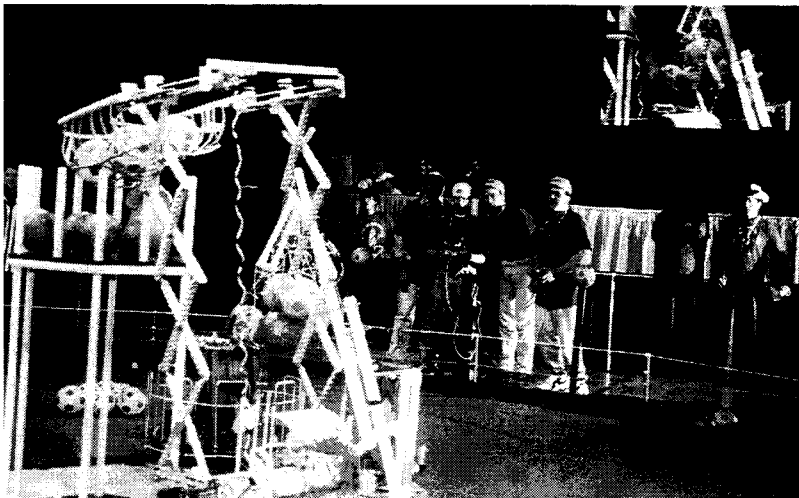
Soccer ball
Collecting
Obstructing
Retrieving
Elevating
Brute
On
Tracks



*From The Times Herald
Record, (Newburgh, NY)
Sat., Feb. 26, 1994*

NFA robot out to snag contest title

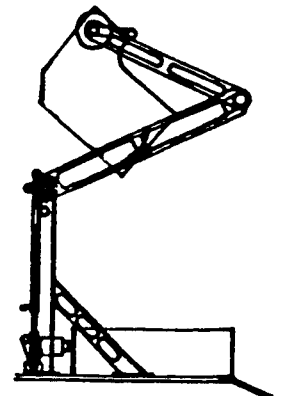
*by Kathy Swanwick
Record Correspondent*



It's affectionately known as SCOREBOT: a squat, remote-controlled robot designed to be a giant on the soccer field. ...SCOREBOT is equipped with nets to snag opponents' shots and arms made of PVC pipe launch its own.

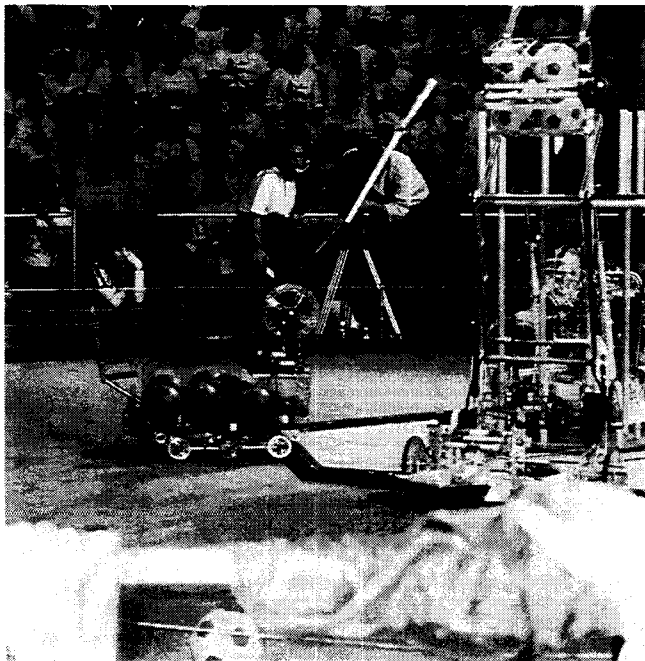
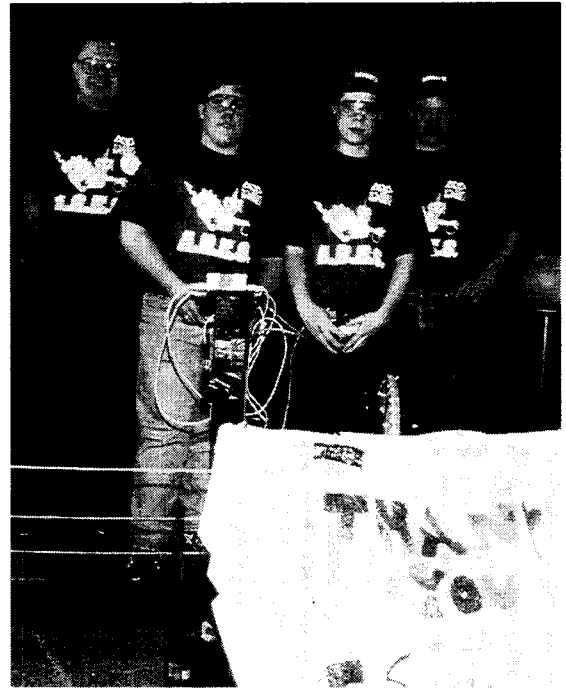
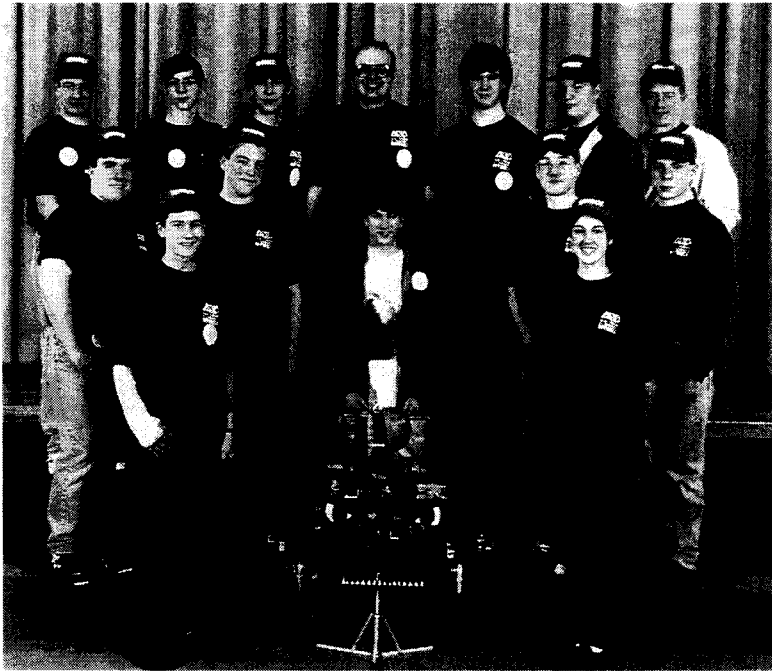
"Now I know how to work and use new tools and machines. It's been very positive, said student Donald Kascum, 17.

Teacher Jacqueline O'Malley said Nashua was "swarming" with students. ... "It's unbelievable, overwhelming," O'Malley said. "It's a thrill; they're excited about science."



A.R.E.S. (Adaptable Robotic Elevation System)

NYNEX Corporation St. Bernard's Central Catholic High School
Fitchburg, Massachusetts



Thank you!

The motor on Nynex/St. Bernard's 'A.R.E.S.' failed.

The newly united E-Systems/Dallas Christian/Greenville High School team heard about the problem that A.R.E.S. faced and donated one of their motors. The story could end there, but it doesn't. Not only did they donate the motor, but they stayed most of Friday night to help this competitor put it in their robot. A grateful team, Nynex/St. Bernard's finished the competition with "Thank you E-Systems" clearly painted on their entry.

The A.R.E.S. Project

Engineering Success



The Student Perspective...

By Lori Deaton

Growing up involved with the U.S. First competition was a constant for me, having watched the last 8 years in industrial vehicles and automation applications. What really inspired me through was the high level of interest in machine design and building that my son, Jeff, and his friends had right from the beginning. From the very start I thought that the \$2,000.00 dollar entry fee would prove to be well worth the effort. From the very start I thought that my son and his friends would not only be able to compete at a national level but also win. I am proud to say that they did just that. They were the first to win the grand prize. This is a great achievement for them and for me. I am proud to say that they did just that. They were the first to win the grand prize. This is a great achievement for them and for me.

What did I've put in on this project. Thanks to U.S. First for providing the contest and all those involved in making it. Don't forget participation is what the students are able to take part in a very exciting engineering project.



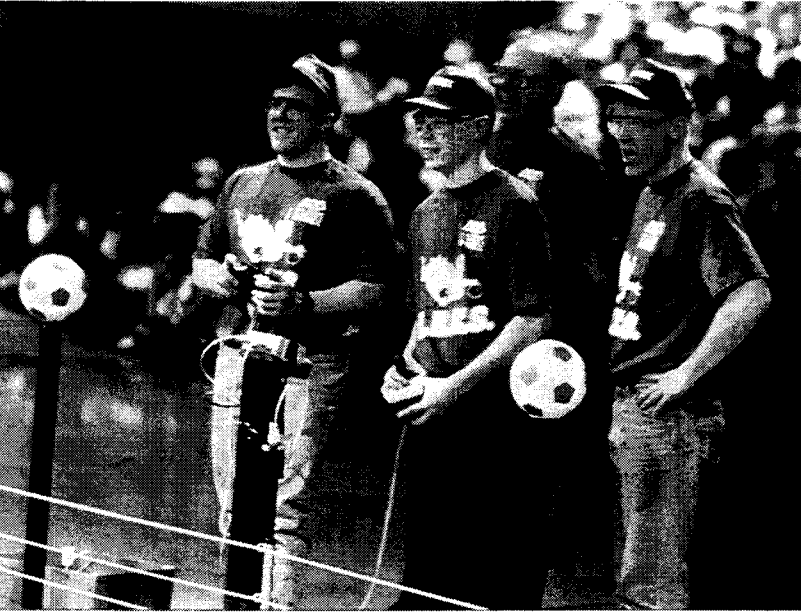
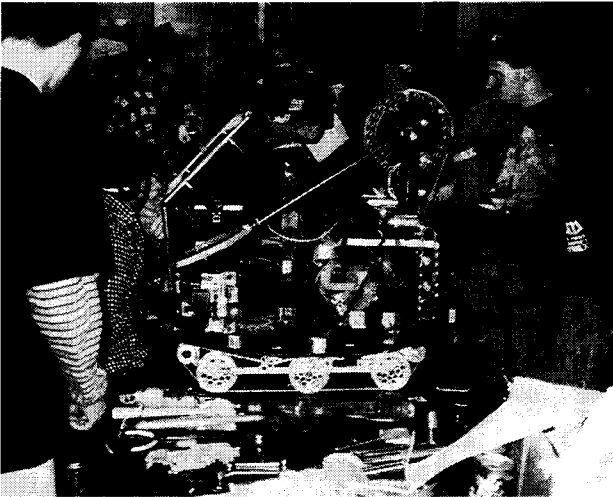
The St. Bernard's/Hynes U.S. First team will be having a rally on Monday February 14 in order to show the school the progress the A.R.E.S. project has made. Attending this all school session will be the Honorable Jeffrey A. Bean, Mayor of the city of Fitchburg. Mayor Bean is very excited to finally have the city of Fitchburg represented at the National U.S. First competition and is very excited about the program itself. The rally is scheduled for the second half of last period on Monday. Be sure to bring your voice, it should be a blast!

By Richard Conato

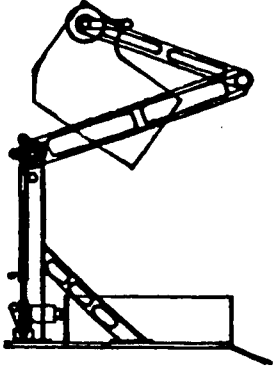
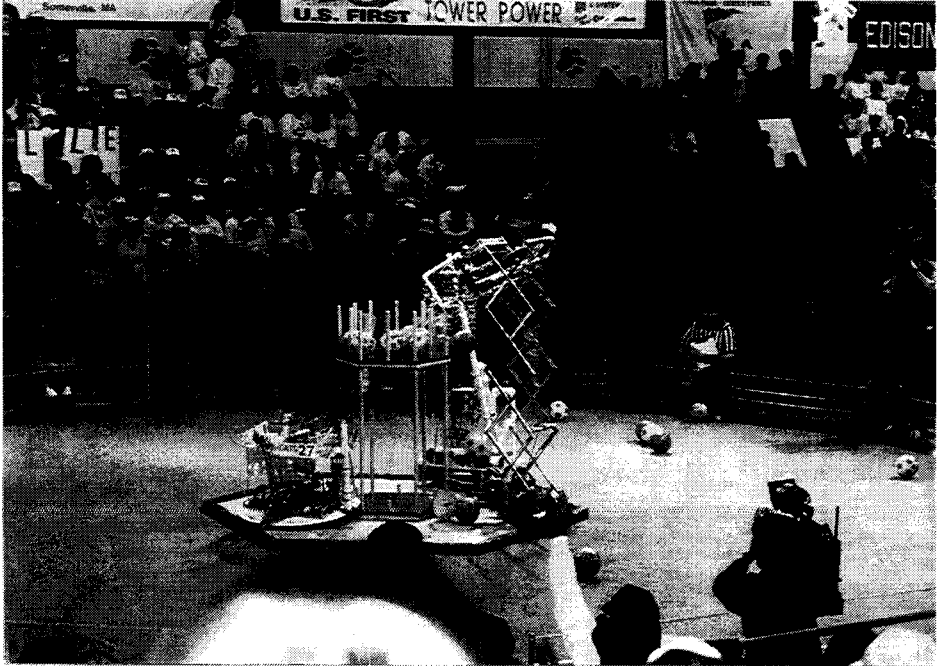
When I first decided to enter U.S. FIRST I thought it would just be fun to build a robot, and knowing all the knowledge and experience I would come away with. In just the first few weeks I started to realize the time and effort needed to go in to make a project. Not only that but I got more involved and now I can't wait to see the winning robot.

By putting into groups, I learned from it that business-like project is one that has been working in the manufacturing group, as I have actually been able to assemble many designs developed by the contest engineering groups. I have already learned the basics in soldering, welding, and in using many different tools and equipment found in a machine shop. I have also been able to help design the ball game and the base.

Overall, I would say that I have learned more in the past few weeks by getting hands on experience in building this robot, than would be possible for months of classroom teaching.

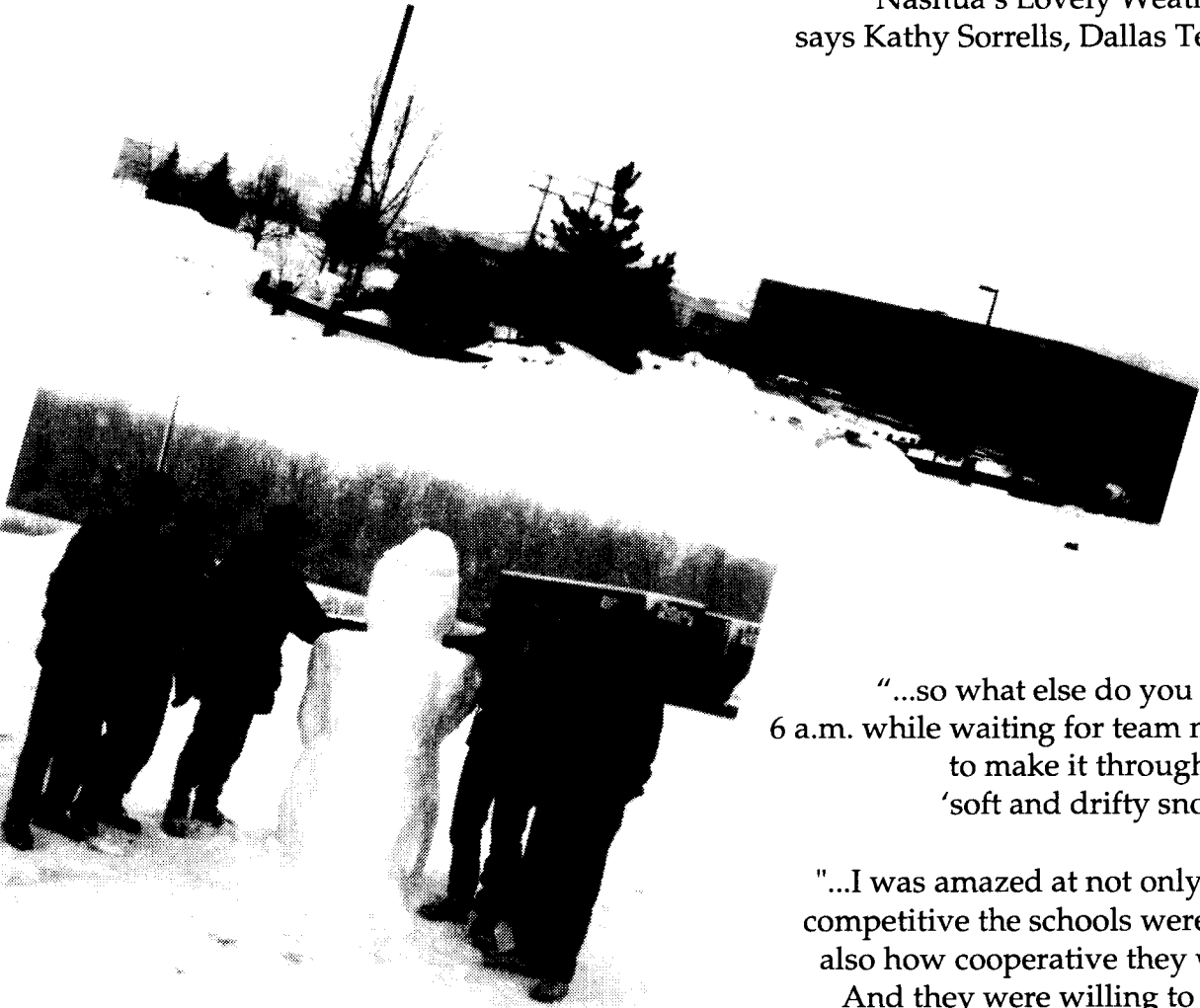


... "The competitors learn by doing, but even more important is the excitement they generate in their schools and communities and ultimately all across America... Every participant in this event, whether contestant, sponsor or observer is carrying that message forward."



...it's *Shhhnow* time...

"Nashua's Lovely Weather,"
says Kathy Sorrells, Dallas Texas.



"...so what else do you do at 6 a.m. while waiting for team mates to make it through that 'soft and drifty snow'?"

"...I was amazed at not only how competitive the schools were, but also how cooperative they were.

And they were willing to help! When the snow delayed all of our tools and spare parts by 15 hours, the teams from Alliant Techsystems/Kamiak High and E-Systems/Dallas Christian High School loaned us tools, materials and whatever help they could until our tools arrived. It was amazing."

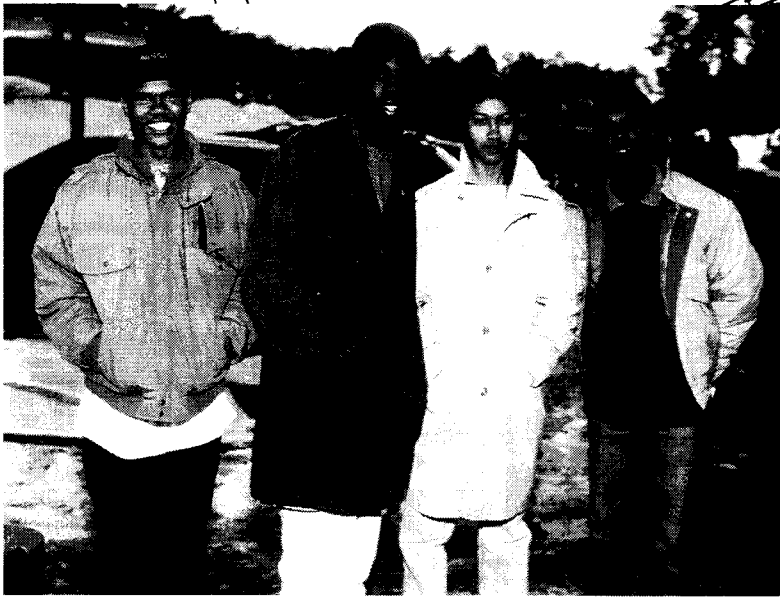
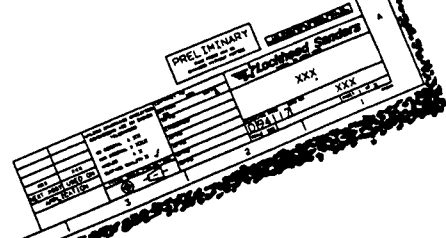
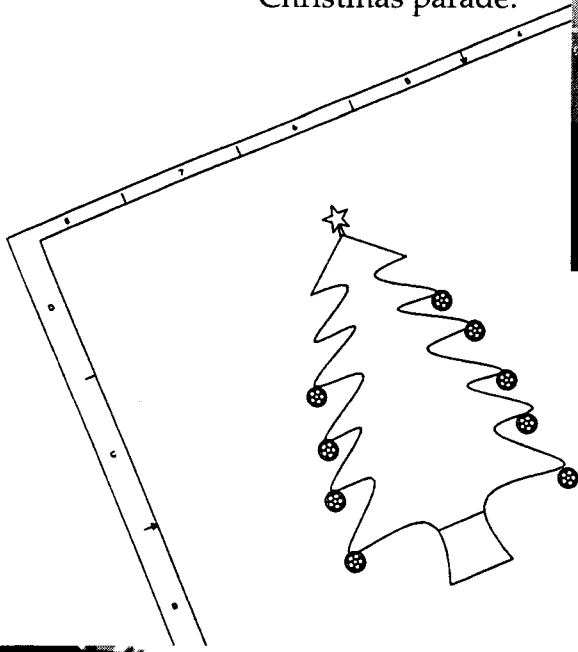
Walt Howard, Boeing/Belleve High



"This big guy appears to have 'juggled' the elements with good humor." January 18, Governor Carlson closed all Minnesota schools due to the bitter 75 degree below zero temperatures (including windchill) - however, more than half of the students endured these potentially fatal temperatures to get to the Honeywell facility and follow through on their assignments so that design and development programs could stay on schedule.

"Holiday Spirit Snowballs into U.S. FIRST Spirit"

Johnson & Johnston/Astro/Brooks/
Salem High School enters a float in the
Christmas parade.



*"If you're seeing your first snow, you
might as well see a lot of it."*

*Every team was so glad to see the
Jamaica team arrive safely.*

"Our LOGO illustrator was hard at work with critiques being passed through fax and over iced roadways until the final example was accepted. Only with sheer belief that everything would work did the SCOREBOT LOGO arrive at school in a blizzard for our teacher to stat a copy and be ready to make our T-shirts for the competition."

