

Stuy Pulse

NYC trendspotting

The coolest competitive looks

694

the team
for 2001

their team spirit secrets
and most embarrassing
moments

ROBOT BEAUTY GUIDE

- hot robot accessories
- get wired

cool school

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in New York City

MAKING THE ROBOT

Stuy's rookie robotics team 694's road to success

hot stuff

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Robot Leaders

FEBRUARY 2001

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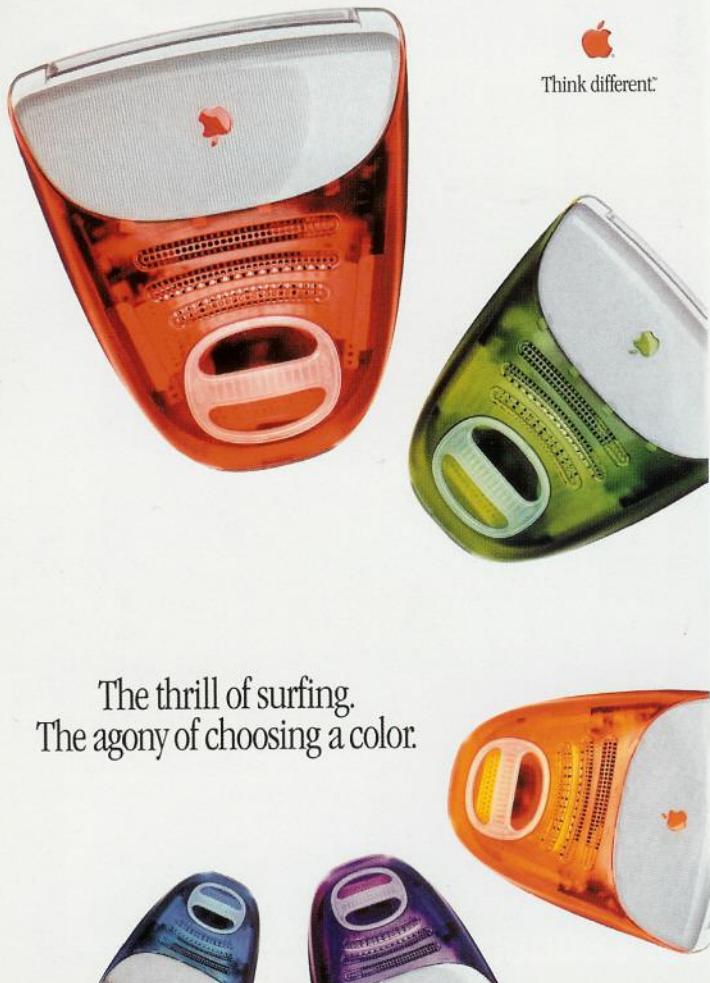
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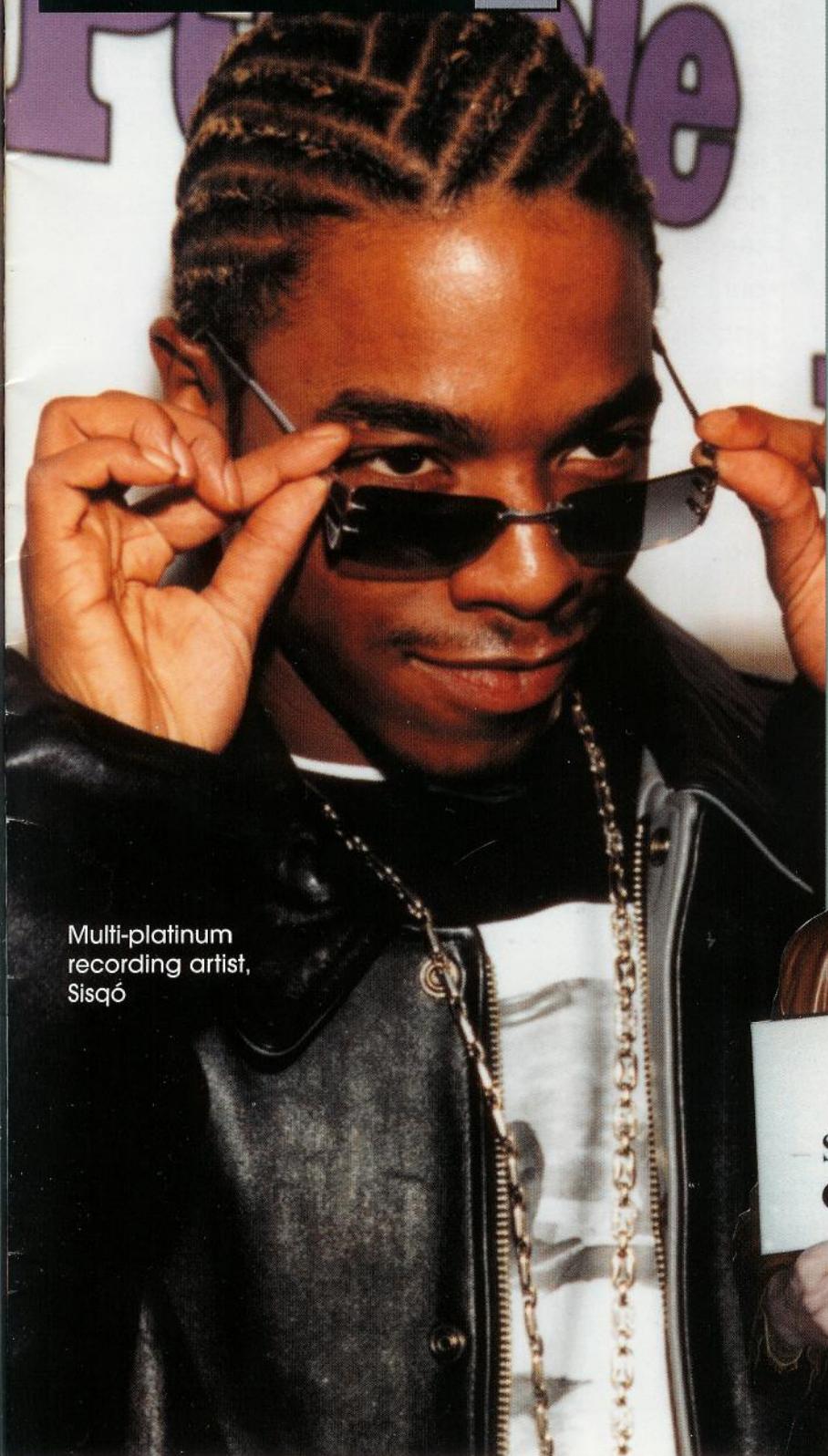
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Stuy People

FEBRUARY 2001



Multi-platinum recording artist, Sisqó

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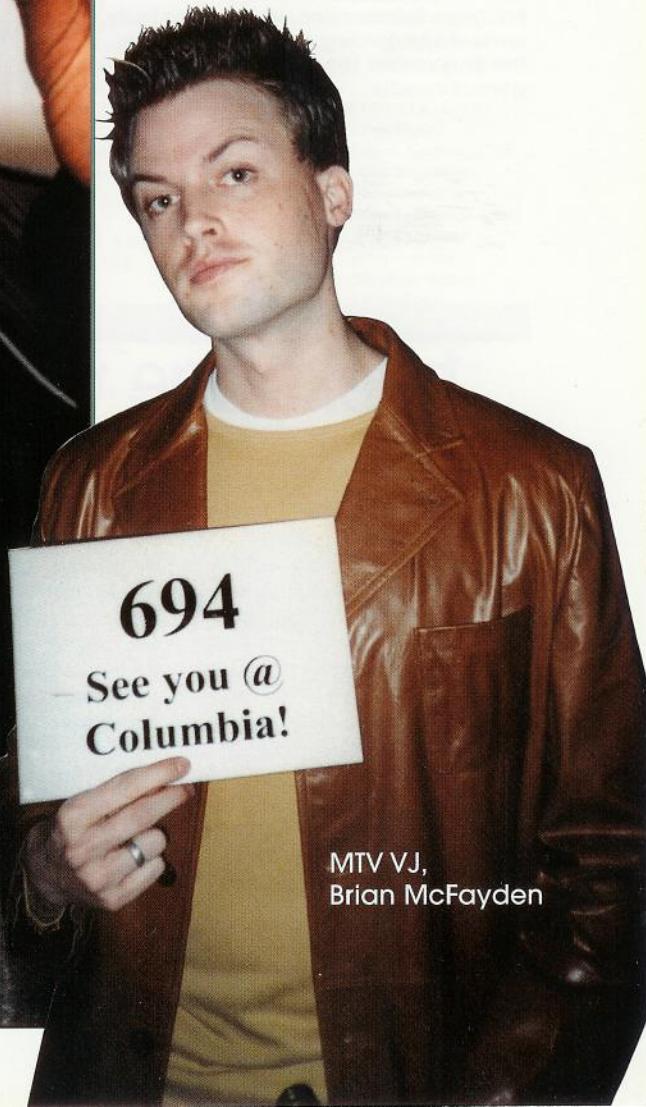
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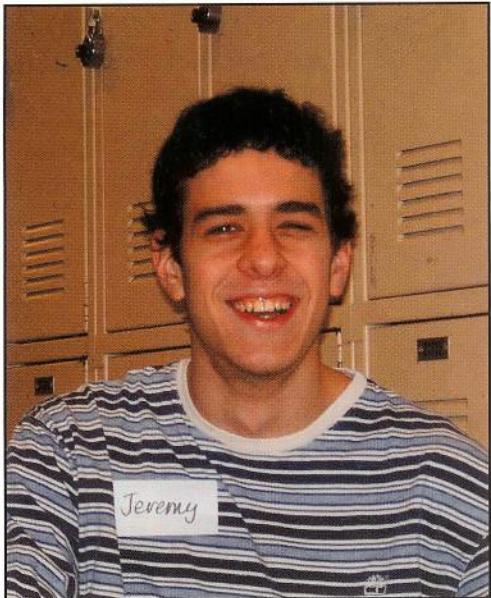
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A sophomore's diary of the first brutal weeks as Stuyvesant High School signs up for the FIRST 2001 Robotics Competition.



MTV VJ,
Brian McFayden

president's scoop



TELL US WHAT YOU THINK

For more information, visit our website, www.stuypulse.org, which is linked to the Stuyvesant High School website, www.stuy.edu.

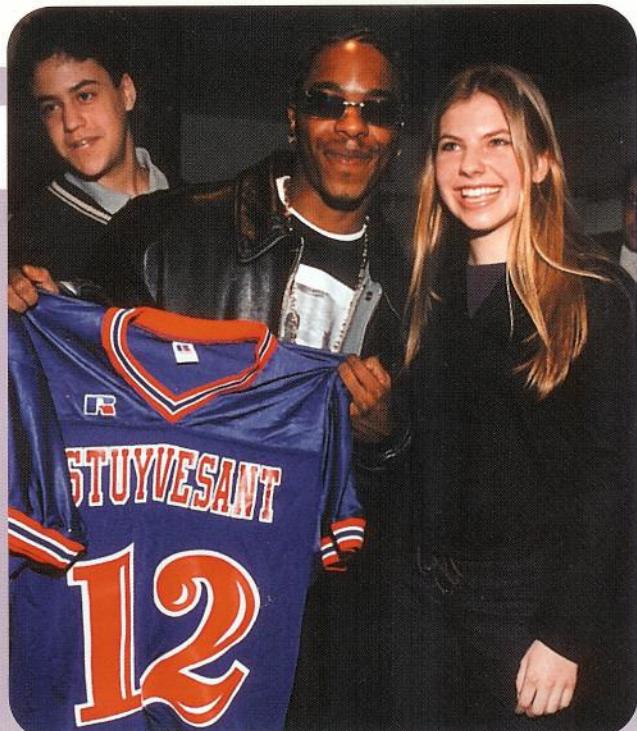
WE ARE A ROOKIE TEAM. THIS IS OUR FIRST YEAR. WE DIDN'T KNOW each other so we had to wear nametags while we worked. And yet, Team 694 from Stuyvesant High School in New York City learned quickly the importance of cooperation and teamwork. We learned how good it feels to accomplish something that seemed impossible! Now, we get to enjoy the fruits of our labor, and actually drive it in our first FIRST Robotics Competition! So here's a magazine that celebrates all of the kids and mentors who put in the blood, sweat, and tears to get this project to fly. Come join the Stuy Robotics Team and Robot 694 at our Regional Competition at Columbia University on March 16 and 17. And wish us luck!

JEREMY SCHWARTZ
PRESIDENT, STUY ROBOTICS CLUB

backstage view

As a member of the PR/marketing committee of the Stuyvesant Robotics team, I was excited to be a reporter at the TEEN PEOPLE luncheon in Manhattan honoring "20 Teens Who Will Change the World." I chatted with everyone from **Sisqó** (who was so nice!) to **Elvis Duran** from Z100 (who I heard talking about this lunch on the radio as I was getting ready!) **Brian McFayden** from MTV agreed to come visit the Robotics Lab at Stuy; so did **ELVIS!** My goal now is to get Robot 694 on radio and national television! This isn't a crazy idea because even **Star Jones** from ABC's **THE VIEW** said she would come down to see what's going on in our fourth floor Robotics Lab. I've learned that all you have to do is ask for help, and nothing is impossible. Cross your fingers for Robot 694!

— Georgia Faust, Freshman



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WHEN IT'S
CRUNCH TIME AT
THE PLANT

IT'S TIME FOR LEVITON



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Stuyvesant People



FACULTY

Stanley Teitel PRINCIPAL
Jeffrey Levin ASSISTANT PRINCIPAL TECHNOLOGY EDUCATION
Anne de Sostoa Manwell RESEARCH COORDINATOR
James Ng ROBOTICS TEAM ADVISOR

STUYVESANT ROBOTICS CLUB

Jeremy Schwartz PRESIDENT
Brendan Moore TREASURER

DESIGN, MECHANICS, CONSTRUCTION, PNEUMATICS, PROGRAMMING

Tayeb Al Karim
Stuart Deutsch
Gordon Franken
David Goluskin
Ray Harris
Ethan Heller
Richard Knipel
Elliot Levy-Bencheton
Andrew Moldovan
Jesse Newman
Daniel Norat
Daniel Rassi
Jeanne Roig-Irwin
Alzaber Rubayat
John Santino
Daniel Schonfeld
Boris Suchkov
Kerem Tangul
Matthew Welsh
Ben Zelnick

PARENTS

Roksana Al Karim
Benita Berkowitz
Constance Burke
Betsy Combier
Rachel Deutsch
Keren Eisenberg
Carol Franken
Tom Franken
Shelley Grant
Robert Harris
Mel Hauptman
Jim Heller
Lawrence Knipel
Lori Knipel
Cornelia Levy-Bencheton
Ann Moore
Donovan Moore
Patricia Moore
Alan Newman
Cora Newman
Michele Rayvid
Kerfe Roig
Paul Santino
Susan Scher
Michael Schwartz
Roni Schwartz
Bea Sommovigo
Lou Terracio
Li Lai Wah
Marcia Welsh
Larry Zelnick

PUBLIC RELATIONS, ADVERTISING, MARKETING

Liz Alspector
Mickey Alterman
Sam Dishy
Georgia Faust
Daniele Hauptman
Susan Law
Marlena McMahon
Eleanora Srugo
Ivan Ting
Tejia Zhang
James Qiao

MENTORS/ALUMNI

Zena Burns
James Carpinio ('89)
Paul Degeorges
Elvis Duran
John T. Frankle ('54)
Amy Galleazzi
John Gorday
Stephen Hilton
Ed Jackson
Martin Kanner ('47)
Denise Keegan
Brian McFayden
LMNT
Dina Mailla
Peggy Mansfield
Mike Owen
Lauren Renaud
Sisqó
Star Jones
Gerri Warren-Merrick
David Wong ('91)
Andy Woo ('96)
Anne Kallin Zehren

ADDITIONAL ROBOTICS

TEAM MEMBERS

Flora Bao
Cale Basaraba
Julian Ginos
Sandy Hsieh
Asya Kleyn
Elton Kwok
Vincent Lau
Gee-Gee Law
Manan Shah
Alice Tao
Paul Hung Wu

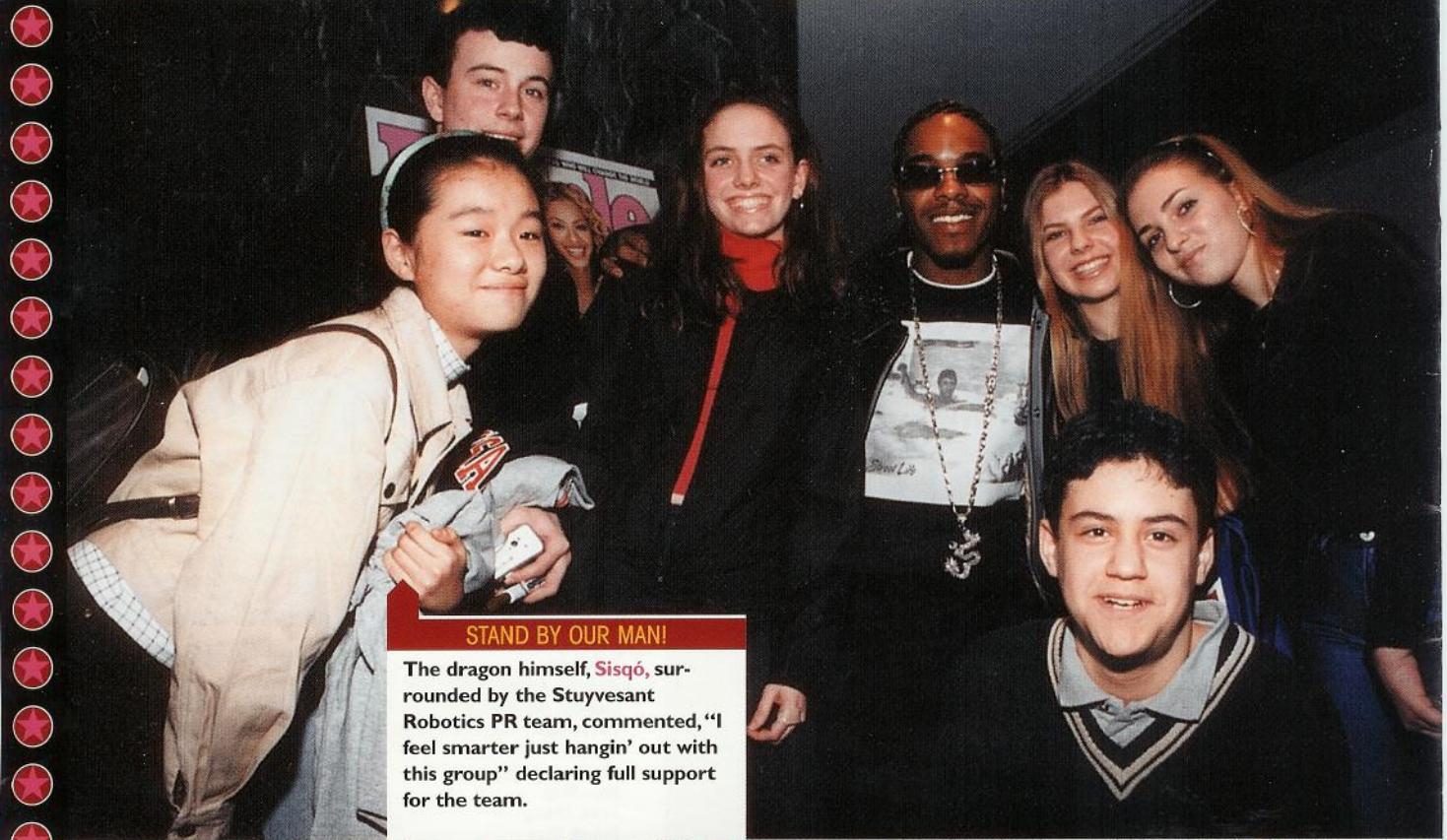
TITLE SPONSOR

Time Warner Cable

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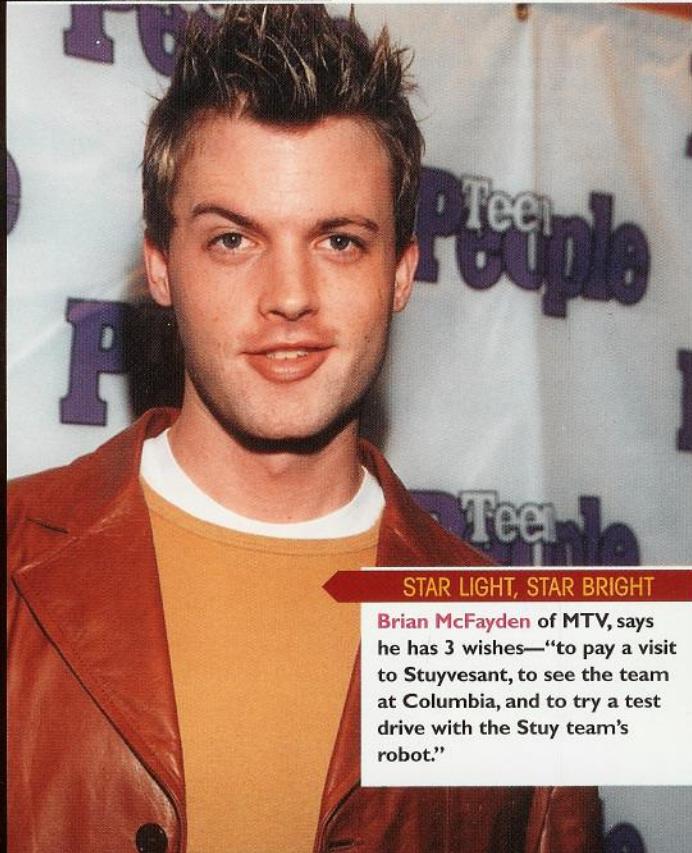
ADP, Inc.
The AOL Foundation
Apple Computer
Cooper Square Realty
Dime Savings Bank
Georgian Press
Leviton
Mattel
Modell's
Stuyvesant Alumni Association
Stuyvesant Parents Association
TEEN PEOPLE

star tracks



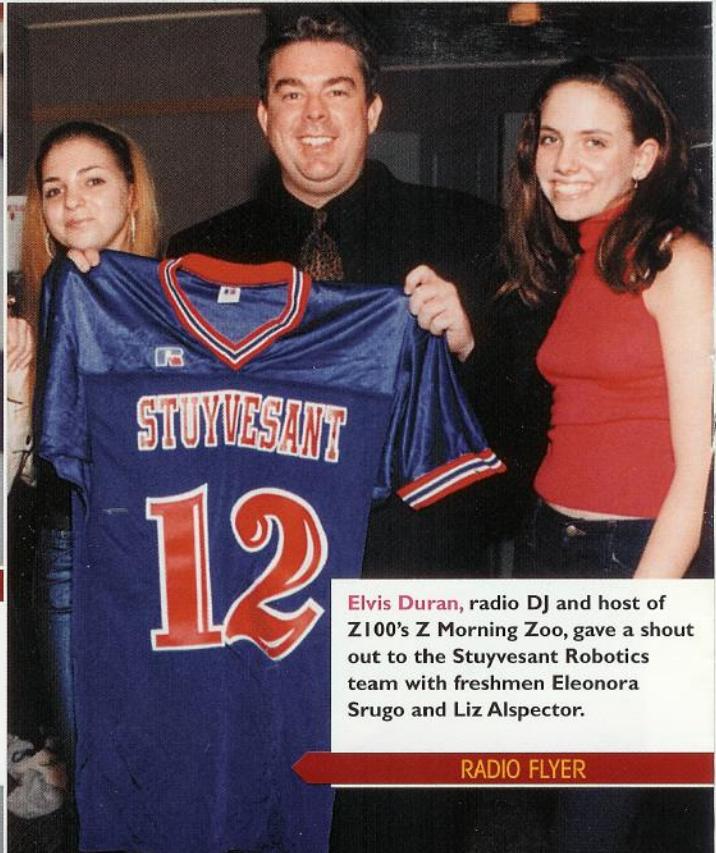
STAND BY OUR MAN!

The dragon himself, **Sisqó**, surrounded by the Stuyvesant Robotics PR team, commented, "I feel smarter just hangin' out with this group" declaring full support for the team.



STAR LIGHT, STAR BRIGHT

Brian McFayden of MTV says he has 3 wishes—"to pay a visit to Stuyvesant, to see the team at Columbia, and to try a test drive with the Stuy team's robot."



Elvis Duran, radio DJ and host of Z100's Z Morning Zoo, gave a shout out to the Stuyvesant Robotics team with freshmen Eleonora Slugo and Liz Alspector.

RADIO FLYER



MARY MARY

New Columbia recording artists Mary, Mary (Tina & Erica) know all about the many rewards of mentoring.

KA-CHING!

It's just like Jerry Levin, CEO of AOL Time Warner, to make an appearance to wish the Stuyvesant Robotics team good luck as the long awaited competition draws near. Freshmen Teja Zhang thanks him for the Time Warner Cable Sponsorship.



Clockwise from top right: Elliot Levy-Bencheron (16),
Brendan Moore (16), Tayeb Al Karim (16),
Jeremy Schwartz (17), Ben Zelnick (15)

making the

robot

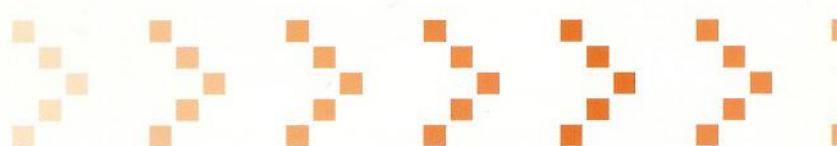
6

9

4

HERE'S WHAT
REALLY HAPPENED
BEHIND THE SCENES OF
STUY'S ROBOTICS TEAM

BY BRENDAN MOORE





I met this senior—Jeremy—who wanted to start a Robotics Club so we could compete in the FIRST 2001 Robotics Competition. It sounded like fun. I agreed to be the Treasurer. I read the manual—Ahhhhh! We need to raise **\$20,000** to enter. This sounds impossible...



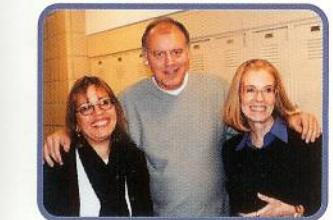
It gets worse. Mr. Ng, my drafting teacher (*who is really hard*), agrees to oversee the team. Anne Manwell, Research Coordinator, is my contact to deposit the money—if we get any, that is...



We register Stuy's first Robotics Club and call our first meeting. Since everyone talks during PA announcements, we cover ourselves by plastering flyers on every bulletin board. Much to our surprise *40 people show up!* We get an e-mail list going.



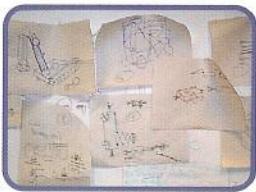
We send a letter to alums of Stuy after getting our hands on a directory. An amazing group of engineers responds. Great mentors like John Frankle (class of '54), James Carpino ('89), David Wong ('91), Andy Woo ('96) and Marty Kanner ('47) pledge their time, and the Alumni Association gives us \$5,000! It's enough to register, so it's a go!



Stuy parents are as excited as the students. It's a good thing because we need them badly for food and transportation since there will be many late nights once the six-week competition begins.

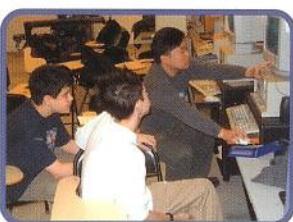


Jeremy and I send letters out during Christmas to potential corporate sponsors. We still need funding, and are amazed when *Dime Savings Bank, ADP, Mattel, Leviton and Cooper Square Realty* send in checks. The breakthrough comes when *Time Warner Cable* calls Mr. Teitel's office (the number is misplaced for a day) to say they will be our title sponsor. "We're going to Disney World." (The Nationals take place there in April.)

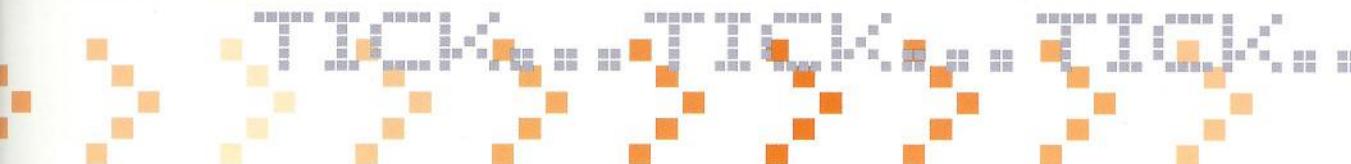


WEEK 1

We brainstorm strategy first since that will determine what we build. Steve Hilton, one of our mentors, teaches us to use a red hat/green hat to suggest and criticize ideas. We have lots of red hats...but it's interesting that the only real conflict erupts between two adult mentors. The student team intervenes and chooses a compromise course. If it doesn't work, we'll try something else...no big deal...



Because we're a rookie team, our big disadvantage is starting from scratch. We don't have extra parts or a storage system for the things we're buying. Thank goodness for internet shopping and home delivery from the Brooklyn Home Depot. Mr. Ng learns to buy everything online. We make a few mistakes. We scramble to find the receipts to return the mistakes. Next year, we'll set up a better purchasing system.



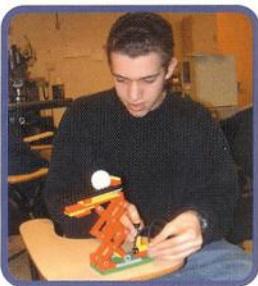


WEEK 2

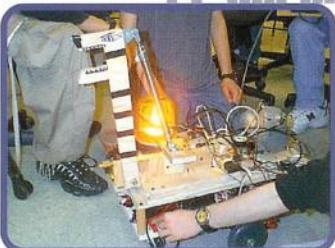
After 18 hours of work, we finish the prototype drive train and programming. It works, and a cheer goes up which brings people running into the lab to see what the fuss is about. Jeremy gets the honor of the first test-drive. We put him in a computer chair and roll him around the hallway. This is a fun moment.



The challenge we are facing is pretty hard: the robot has to put a 30-inch ball onto a seven-foot goal, and move the goal onto a teeter-totter bridge. It's clear we have to build the goals and set up a mock playing field and bridge so we can test our robot. We make the first goal's base but don't read the update that tells us the base has changed dimensions. That will teach us to keep current!

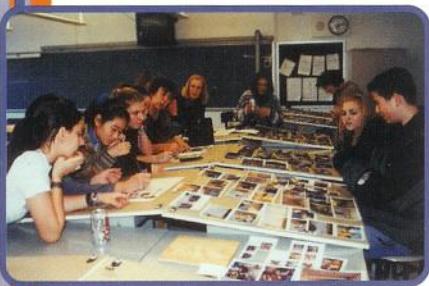


Gordon Franken, a freshman who loves physics, builds his concept of an accordion (needed so the robot can raise the ball to the height of the goal) with LEGOS at home and brings it in to make his case. This is so simple. Why didn't we think of this in Week 1? Mr. Ng even has LEGOS in the Lab. We are going to be great next year.



WEEK 3

Final exams and flu hit us. This actually gives us more time to work in the lab which we badly need as parts arrive and we begin construction on the accordion and drive train. Someone uses our Velcro to give the robot some personality. Who let the dog out?

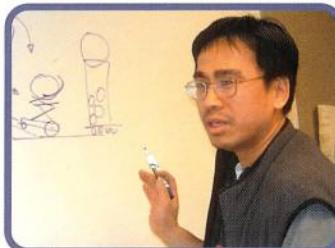


TEEN PEOPLE volunteers to host the PR/marketing/design committees. More than 30 new students show up, including a dozen freshmen girls, to join the Stuy Robotics Club. Our team doubles. They begin interviewing the engineers for their marketing plan. We are worried because they are asking us questions like: What do we wear? Where do we hang out? What are our most embarrassing mistakes?



WEEK 4

Whether we win or lose, we've eaten well these last weeks: pizza, bagels, Twizzlers, chips, cold cuts, Chinese, Indian, Italian, donuts, muffins, granola bars, Coke, Snapple, cookies (chocolate chip, black & white and Oreos), fried chicken, biscuits, chocolate cake, guacamole, Rice Krispie Treats...we're stuffed...



On the next to last Saturday, Richard Wong, a mentor for our rival Brooklyn Tech, drops in to answer questions and offer help. He's had experience with FIRST. Richard is fantastic, and it's clear we need to concentrate on developing an alliance strategy in our last week. We learn so much from this visit, we all wish we had met Richard last month...



With only two weeks remaining and expectations high, emotions from confidence to anxiety to terror start to surface. Will Rookie Robot 694 be finished on time? Stay tuned...or better yet, COME TO COLUMBIA on Friday and Saturday, March 16th and 17th to cheer us on!



coolschool

of the month

Students earn their invitation to Stuyvesant High School in Battery Park City, New York

The famous Stuy bridge over the West Side Highway connects the students to Lower Manhattan.



SCHOOL STATS

population: 3200

famous grads: Three Nobel Laureates and
celebrities: Lucy Liu,
Paul Reiser, Tim Robbins

founded: 1904



WHY IT'S COOL As the premier New York high school in science, mathematics, and technology, Stuy students are selected by competitive examination. Its 1992 ten-story complex complete with gigantic swimming pool (but no football field), 12 laboratories, robotics and energy shops, more than 450 computers, a weather station and satellite dish and has a magnificent view of the Statue of Liberty and Ellis Island in lower Manhattan. It continues to serve New York's diverse immigrant population with students from virtually every nation in the world. Stuy is known for its Debate Teams, its large number of National Merit Scholars and its Intel finalists.



writeon

what we read on the
robot egroup mail

At the next few meetings we will tackle problems like responsibilities and team organization, as well as scheduling and planning. In the meantime, the rules are out and WE WILL NEED EVERYONE'S HELP BRAINSTORMING on how to play this game. WE ONLY HAVE SIX WEEKS. PRINT THE RULES. CARRY THEM WITH YOU AND READ THEM. Read them all day Sunday, in the morning on the train, and at lunchtime, and between classes. None of it will make sense at first; if it does, you can explain it to your teammates!

-James, Mentor

OK, I will be there tonight and will cover the food. I am buying napkins, cups and plates for them in bulk, maybe even soda or better yet, water. I hate soda and they don't need it everyday.

-Roni, Mother

I grew up in a home where we were pushed to be technically able; it led me to develop an advanced knowledge of technology, back when I was only attending high school. At the school I found friends that had fun doing these technical things with me, and this was a resource that I struggle to find even today. The school is a rare environment, with rare students with extraordinary abilities. The competition has the potential to take those abilities that are threatened by lack of use, and amplify those abilities beyond the level of professionals in industry. I wish it had been there when I was in school.

We seem to have started this wondering if we can build a robot, but I don't intend to let anything get in our way. I expect the team to build a robot and to have it compete well. We might not win, but we sure won't lose.

-James

Thursday we obtained lots of materials, built half of a goal and started drawing robots. Wednesday we worked through numerous real design possibilities, and inflated the balls to get an idea how they interact. It is time to get specific about prototypes (Where have I heard that before?) I am SO exhausted.

Sunday we will meet at 10:00 AM. Late starters can enjoy a late sleep; come at 11 or later. Does anybody know if there has been food planned?

-James

OK, just for those of you who weren't there (JEREMY!), here is a little summary, of Saturday's meeting. If I forget anything, sorry.

Our amazing programmers worked on scaling down the movement of the robot by 1/3, activated by a switch. They succeeded, but when the robot was tested with it, one of the wheels did not rotate. They also re-wrote some of the script for the pneumatic arm.

There was much improvement on constructing the base of our second prototype, new holes were cut for axles, and so on. The PVC-pipe

large-ball lifter was improved, with ideas on which motors to use, and how to mount them.

Work on field construction got underway. Mr. Kanner demonstrated his equations on how much force it will take to move the bridge up and down. Wood for the bridge was cut to the right lengths, and prepared for further refinements.

Oh, and special thanks to Tayeb's mom for bringing us an entire, home-cooked, delicious lunch, if only we could eat like that everyday!

-Gordon, Freshman

I wanted to let you guys know of our invaluable resource, which I hope James tried contacting. Richard Wong has 2 years experience mentoring with the Brooklyn Tech team. He said he could help us if our team runs into any roadblocks. Thanks!

-Andy, Mentor

This week-Fix drive assembly/complete drive assembly, tracks for motor mounts, bolting system able to withstand torque of motor, fix any sprocket problems, reattach coupling so it does not turn, start working on outer shell.

We can do this. Seya tomorrow.

-Ben, Sophomore

It's really important that everybody on the team has an enjoyable experience. They said it at the kickoff, and in the workshops. They repeated it over and over, and I agree with it. So speak up if something is bothering you or you are not having a good time.

-James

We are in our final hour. You must realize how people are putting these things together. One bolt here, one bolt there. THAT WILL NOT DO: we need structural reinforcements, and you need some ideas on how to do it. The goal can land on our robot, and our accordion lift will be a plate of spaghetti. WE HAVE ABOUT ONE WEEK FOR BUILDING, RIGHT? DOOM AND PERIL ARE KNOCKING ON OUR DOOR-do we let them in? Start brainstorming-but in little, quick 3-minute bursts-then DO IT. Bolt it all together. Don't waste time calculating sines and cosines...you kids are crazy. Just lay it out and draw the line and cut. Drill holes and bolt. It's going to work. GET ON IT...

-James

P.S. the bridge is not for playing on; damaging the floor or any part of the school will result in termination! Thank you and have a restful evening.

-Mr. NG!

I want you all to practice tightening bolts. Often, in practical situations, "how tight it should be amounts to "less than it takes to damage the tools or the bolt." The truth is there are recommended torques to tighten a bolt to, but most people just wing it. You have to try to tighten bolts, and see what it takes to break them; if you don't practice this, you will leave things loose and they'll fall apart at the competition! Yeah! HAHAHAHAHA! It'll be funny! All those other teams laughing, but meanwhile the ones in our alliance will be pissed, because the brainiacs from the premier science school in the financial and political capital of the world can't tighten a bolt right!!!!!!

(to self: Okay. Calm down, James. Relax. It's okay; they'll all figure it out....)

So tomorrow all of you who have never broken a bolt should take a screw and put a nut on it and put it in the vice and tighten it until it breaks. I'm serious; this was recommended at the workshops in NH, and it's a GOOD IDEA; don't be ashamed.

-James

Q How can I join the Stuy Robotics Team?

A. If you are a Stuy student, and have an interest in engineering, electronics, mechanics, computer design, art, marketing, reporting, writing, photography, computer programming, or just about anything that's fun, JOIN!

In September, come to the Club Pub Day, and sign up for the Stuy Robotics Club. It's that easy! Or look for signs announcing our meeting dates and rooms. And just come to a meeting. Or listen to the morning announcements about our club meetings. And come! Or contact Brendan Moore at dbmoore@pipeline.com.

Join us at Columbia to cheer Rookie Robot 694 on in the Regional Competitions on March 16 and 17. And join us for fundraising efforts for Robot 694, Jr. which will start as soon as we catch our breath and celebrate this year's win!

trendspotting

Battery Park City, NYC

top 10

1 **hot hangouts:** Robotics club, the park, Winter Garden, sound booth, senior bar, pool hall

2 **best bites:** Pennsylvania Pretzel, Victor's, Burritoville

3 **shopper's delights:** J&R, Tribeca Hardware, St. Marks Comics, Borders, Modell's, H&M, Blades Board & Skate, Old Navy

4 **funky footware:** Puma, New Balance, Reeboks, boots, Skechers

5 **star power:** Kevin Spacey, Albert Einstein, Jon Stewart, Michael Crichton, Robin Williams, Lawrence Fishburne

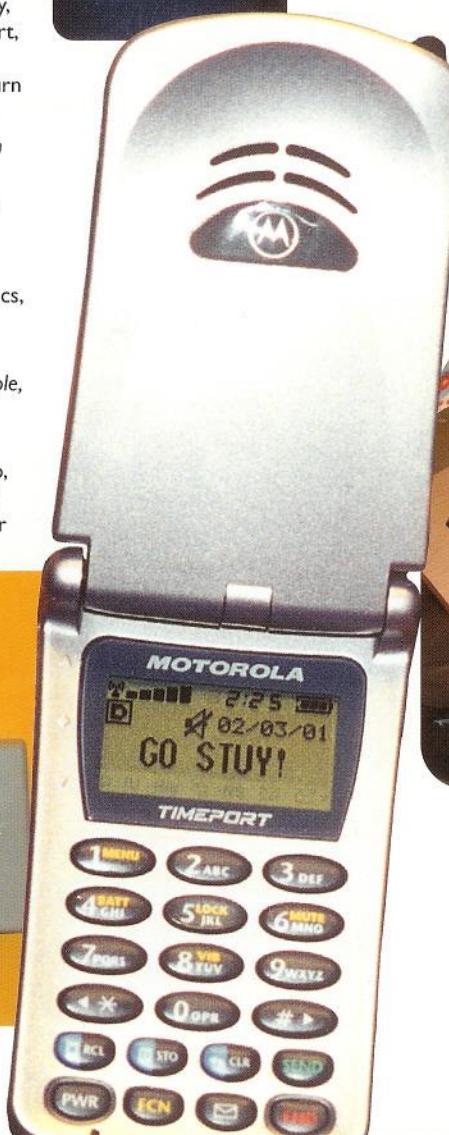
6 **favorite flix:** Matrix, Star Wars, Usual Suspects, Austin Powers

7 **tube watch:** Friends, The Simpsons, Daily Show, SNL, Whose Line is it Anyway?

8 **clubs & causes:** Robotics, magic, chess, Ultimate Frisbee

9 **favorite zines:** Teen People, Popular Mechanics, Cosmo, People

10 **fashion frenzy:** The Gap, Ralph Lauren Polo, Mudd, Paris Blues, Tommy Hilfiger



robot woes

their most embarrassing moments

1 Jeremy Schwartz

"I'm the President, but I missed a bunch of meetings because of senior exams and the flu. To get me back, the team told me to put two wires together. The two wires activated a motor and the ball grabber hit me right in the head. Very funny, guys."

2 James Carpino

"The first prototype, with the control system hooked up, had just been completed after eighteen hours of work. Jeremy moved the joystick on the controls, the robot jumped backward, ran right into the edge of a metal desk, and the electrical wires were severed. Great driving, Jeremy!"

3 Ben Zelnick

"I was trying to make the battery work for the first time and realized we had the wires reversed. Positive on negative...duh!"

4 Tayeb Al Karim

"I got the blame for the bad battery wiring job."

5 Steve Hilton

"We were taking apart the main drill motor, and when we put it back together, we had a part left over. Even though it worked without it, that was pretty embarrassing."

6 Andrew Moldovan

"I had put a screwdriver in to hold up the pneumatic arm. Everyone forgot about it, so when we were testing, the prototype started going crazy and hitting people. Ben was sitting in a chair, and a screwdriver flew and landed in his hand. We were all like, 'where did that come from?'"

7 Jeffrey Levin

"A parent tried to help with purchasing, but ordered too much carpeting by mistake. It was twice as much as we needed, and the carpet roll was so big that we couldn't get it into Stuy from the loading dock. I had to get the carpet company to send someone to cut it into smaller rolls. He's off the purchasing committee."

2



ONE FIND
TRIBECA HARDWARE
RECEIPT - we need
it for \$50 returns!
Ben - did you have it?
PTSA

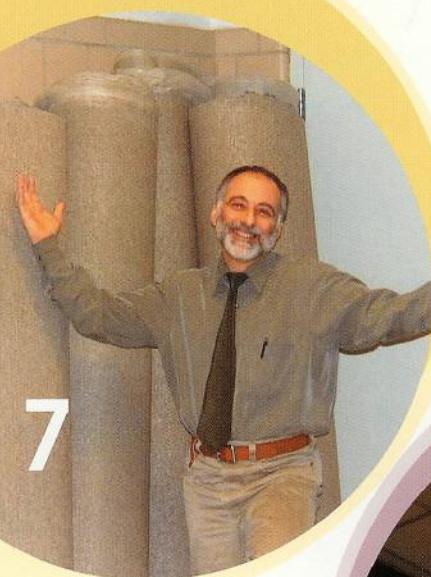
1



Very
funny,
guys

**“Positive
on negative...
duh!”**

7



**“Where did
that come
from?”**

3



6



5



**“That
was
pretty
embarrassing.”**

4

