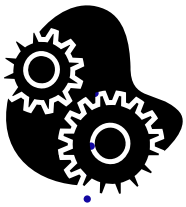
Robot Chicks Union Newsletter

Volume II
April 2006



Robot Chicks Union

CONTENTS:

Welcome!

Hello once again! We hope that you were waiting in anticipation for this newsletter. The staffers thank all contributors for the articles that are in this issue. But we are sure that there are more creative souls out there. So we are asking them to come forth and showcase their creativity. This newsletter is not for us but for everyone in the FIRST community. Through this newsletter, the RCU hopes to reach ***you***.

Thank you for reading,

~ The Newsletter Staff

Check out the Bulletin for Important Information

What is the Robot Chicks Union?

The Robot Chicks Union (RCU) advocates the involvement of females in FIRST and, in general, to inspire women of all ages to value science, math, and engineering. Its mission is to help members build a strong community, to become mentors for future generations, and to develop into successful, perseverant women.

Greetings and Salutations !!!

Hello RCU members,

It's been a long time since we have had an opportunity to "connect". An exciting Build Season, an exciting game - so many wins for young women - as teams and as individuals. As I've watched the awards ceremonies for several of the FRC Regionals I was really struck this year by the number of young women represented both on winning teams and also in the Pits. And how many all-girl teams there were! I'm sure that's reflective of the number of young women in FRC as a whole! And that makes all of us positively excited about what the future has in store for us.

So, I suggest - a little Celebration is in order! You have had so many accomplishments both individually and as a group, I'd suggest that Robot Chicks take a moment to reflect on how very successful you have been. I'm sure that you can look on your experiences this year and be able to identify at least one new achievement you can be proud of. A new role you took on, a new piece of equipment you've learned to master - etc. But even more than just celebrating yourself - I'd like to suggest that you share your successes - with other RCU members, other young women and younger girls. It's by sharing your successes that you teach others to be successful and encourage the next generation!

So, celebrate! - Enjoy the wins and the learnings and share with those around you!

With encouragement and applause!!

~Marie Schulmann

What's New in the Union?

First off, we would like to congratulate Julie Rowe, the winner of our Secret Biography Contest. Also congratulations to the following recipients of the Chief Delphi's Unsung Hero Awards, one of the founders of the RCU, Kristen Kelso and Southern Florida's Adult Advisor, Patricia Chen. Thank you ladies for all your hard work and dedication to FIRST and the RCU.

The RCU has been busy with meetings and presentations at different Regional Events. Please join us for our general meeting at Championship in the Georgia Dome this year. We will announce the date and location soon.

Good luck to all teams!

~ RCU International Leadership Team

Chapters Update:

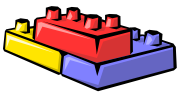
Michigan:

The Michigan Chapter as usual has been really busy. If you check out the spotlight you can read about a workshop we've put on.

Our chapter will also be leading the RCU International Conference so we hope to see you there!

New Hampshire:

The New England Chapter of the RCU has been busy in the competition season! We held a meeting at the Granite State Regional, and met a lot of new members- Welcome to the RCU!



Also, at the Boston Regional we held a pilot LEGO drive. Here we were able to raise money for local Girls Inc. LEGO League teams, and raise awareness of both the RCU and the local FLL teams. With the support of gracious donors and supporters, we hope to keep our LEGO Drive going strong in future years.

Southern Florida:

The Chapter hosted a meeting at the Florida Regional in March. In the two days of discussions, the ladies arrived at a mission statement: "To empower girls to explore the possibilities of science and engineering as careers, to develop self-confidence, and to provide support for each other not only in professional development but in personal development as well."

The Chapter conducted a LEGO Drive for Girls, Inc. We would like to thank the teams for supporting the drive. Congratulation goes to Team 1649, winner of the drive. They will get a $25.00 gift certificate to Home Depot.

A meeting was schedule for the Palmetto Regional, in Columbia, SC. We hope that we can interest teams to form a chapter in South Carolina.

RCU Spotlight:

The "Women's Role in Our Technological World" Workshop: A Pure Success

At this year's FIRST remote kickoff in Novi, Michigan, the Michigan Chapter hosted its first major event, the "Women's Role in Our Technological World" workshop. Pulling in an approximate thirty participants, female and male, the workshop featured a question-and-answer session with three women currently working with General Motors in its engineering fields – Amy Luebke, Ursula Hall, and Gina Sweet.

The questions posed ranged from "What made you decide to become an engineer?" to "How do you suggest that I get more involved during my high school years?" to "What is daily life like as an engineer?" Each of the women detailed on each point to their greatest ability, introducing personal experiences into their answers and helping the audience to relate to them.

Indeed, the responses these three ladies gave helped the students to gain a greater understanding of the studying, communication, and dedication it takes to become an engineer in today's work force. Amy, Ursula, and Gina also taught how said skills are applied to the different fields of engineering in talking about examples from their own places of occupation.

Before the workshop ended, the women voiced their words of advice, and the audience took away a most important lesson – that the greatest things people can do are to always keep their options open, focus on their goals, and look for opportunities in everyday tasks.

The Michigan Chapter of the Robot Chicks Union hopes to continue this tradition and reach out to more students by organizing a similar workshop for next year's Kickoff event.

Calendar of Events:

April 27:
Championship Meeting

June 3rd:
Deadline for Articles

July:
6th Year
Anniversary of RCU

Good Luck
To All Teams This
Competition
Season!!!

Congratulations to the Class of 2006!

Good luck on your future endeavors!

Story Time:

Max DePree once stated, "The key elements in the art of working together are how to deal with change, how to deal with conflict, and how to reach our potential...the needs of the team are best met when we meet the needs of individuals persons." Throughout my high school years, I was highly energetic. I was involved in building the robot, scouting the competition, and driving on the floor team. After taking some time off, I returned to FIRST to help the younger students. The realization that I was no longer one of their peers, working alongside them, and that I was now a mentor, providing and sharing my knowledge and experiences with them, was a large adaptation. During the 2005 FIRST, season I was able to see transformations from a unique viewpoint. That season, I began working with the "Awards" section of the team, an area in which I had no previous experience. With my knowledge of emerging technologies and software applications, I wanted to make new and lesser-known applications available to the students that they did not have access to in their rural schools. Upon the completion of the season, and the arrival of competition, the students had experienced technologies they would have not otherwise seen until their college years (like what?). The students successfully completed a Woodie Flowers Award entry and a Chairman's Award entry that received excellent commentary from the judges. I knew that the students felt successful and were proud of themselves and their peers when they returned from their Chairman's Award presentation aglow with smiles.

--Ashley Weed, Team 84

Story Submission:

The story for the next issue is:

Theme: Reflections

Topic: How do you thank your mentors?

Please send your story to:

homs7c@yahoo.com

Please write in the Subject Line:

Story Time Story - Reflections

Guidelines:

Word Count : Maximum 350 Words

Submission By June 3, 2006

Thanks and have fun writing!

Bulletin:

Check It Out!

- If you have any photos relating to the RCU, past or current, please send email them to tiffrcu@yahoo.com. Thank you!
- If you are interested in starting an RCU Chapter in your area please contact the RCU Leadership Team.
- Don't forget about our Monthly Chats! To get access to our chat site please contact, Ms. Chen at homs7c@yahoo.com. Thanks! We hope to "see you" there!
- Check this out to learn about Award Letters: http://recp.mail.salliemae.com/servlet/MailView?ms=NDkzNTIzS0&r=MjY3MTQ0MzAzMAS2&j=MTI5NTM1ODUS1&mt=1

Firebirds' Fiesta

By :Alicia Lin

The Firebirds' Fiesta, a post-build team social and a fund raiser for FRC team in Ghana, was a success! Joe from team 357 says "AWESOME!!!!! 2 big thumbs up!!" The party was a lot of fun. Five teams came to the fiesta and over $400 were raised.

The Fiesta had laser lights, a DJ, DDR, lots of food, and piñatas! Team 1712, Dawgma members were awesome at DDR. Definitely, they were the champs of the party. We also had games that had team mentors competing against each other.

Due to the fundraising efforts, the Firebirds were able to send 11 members from the newly created Ghanian team over to America to observe the Philadelphia Regional. They arrived at JFK airport on March 26th and stayed for 2 weeks. The students from Mount Saint Joseph hosted the Ghanians at their homes. The visitors attended classes with the students. It was truly cultural experience for our school.

The Fiesta was definitely a fun experience and a good way to let off steam after build season. We're thinking of throwing it again next year! We hope to see you there!

The Fiesta!

Photos: Courtesy of Alicia Lin

STORY CONTEST

Send us a story which celebrates what you have achieved this build season on your FIRST team - and what it meant for you.

Winners receive:

!st place - $30

2nd place- $10

Gift Certificates to Target.

The RCU reserved the right to publish the essays in the newsletter. All entries will not be returned to the author. They must be sent in by June 3rd to homs7c@yahoo.com. Please put in subject line: Story Contest– FIRST means to me.

Thanks and good luck!

Technical Corner:

Many different systems contribute to the functionality of the robot. So far in this FIRST season's RCU newsletter series, we have revealed information on chassis building and C programming. In this edition, we will be discussing the basics of that which controls that metal contraption you like to call your "baby" - the electronics.

Charge – The fundamental quantity in electronics, there are two kinds of charge – positive and negative. Charge is measured in Coulombs (C).

Voltage – Synonymous to the manner in which objects have mechanical potential energies, voltage is the difference of potential energy per unit charge between two points. Voltage is measure in Volts (V).

When you use a voltmeter or a multi-meter (which is a voltmeter, ammeter, and ohmmeter all in one) to find the voltage of a FIRST competition battery, you are really measuring the difference of potential energy per unit charge between the positive (red) terminal and the negative (black) terminal.

Current – The amount of charge flowing through an area of material in a given amount of time. Current is measured in Coulombs per second, also known as Amperes (A), and can be found by using an ammeter or a multi-meter.

The circuit breakers that are in your electronic box – found in 20, 30, and 40 Amp increments – limit the amount of current that passes through a certain part of your robot, preventing too much current flow from going through that part, and keeping the people around the robot and the robot itself relatively safe.

Power – The rate of energy transfer, power is the voltage multiplied by the current (W).

Resistance – The potential difference divided by the current through an area of material, measured in Volts/Amperes, or Ohms. Similar to voltage and current, it can be measured with an ohmmeter or a multi-meter.

The FIRST competition battery has an internal resistance; therefore, although it reads on the label that it has X volts, the voltage that you measure across its terminals is going to be less than X. For the same reason, if you measure the voltage while it is charging, it is going to be greater than X.

To help understand more concepts we also will be taking questions you have about any technical information. We want to provide the information you want to know. To submit your questions, please email them to: homs7c@yahoo.com. Thanks!

How To Sign Up with the RCU!

We are slowly increasing our membership, if you are not a member and wish to be here are the directions:

1) Sign up with our Yahoo! Group
2) If there is a chapter in your state, contact the chapter lead.
3) Email homs7c@yahoo.com to receive login information for our chat service.

We hope you "see" you at our chats and other events!

A Rookie Mentor's First Experience

By: Lisa Perez

This past year, I had the opportunity to help the University of Michigan's Women in Science and Engineering (WISE) program with the establishment and mentorship of an all-girl LEGO League team.

Even though the team had a late start, the M Go Blue Bots were able to pull the details together. From the get-go, the girls amazed me with their dedication of four hours every Sunday and their strong interest in both the robot and the marine science project. They engaged with the challenge right away, deciding on their design and research topic by our second meeting.

As a new mentor, I wanted to have the chance to teach them about the fundamentals and process of design. Indeed, I did have that chance. But at the same time, they impressed me greatly, coming to me before I even had the ability to come to them, and asking me questions such as "How do we break this task up so that we can finish it in the time we have?" and "What does changing the gears do?"

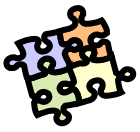
The girls always looked to improve upon their design and presentation and stayed open to any advice we had to give. All present at the meetings learned from each other, not just in terms of engineering, but also in the extensive enthusiasm for that which they built and researched.

CONGRATULATIONS TO OUR SECRET BIOGRAPHY CONTEST WINNER! Please read her winning essay!

I read the column and I immediately knew the heroine- Grace Hopper. She is one of the women I look to and aspire to be like. She was, and continues to be a very influential woman, not only because of her contributions to computing and technology, but because she broke down barriers that no woman had yet done. She double majored in physics and mathematics, demonstrating an amazing level of intelligence, dedication, and hard work, three traits I strive to epitomize. She then became the first women to earn a Ph.D. in mathematics. Constantly working in a mans profession at school, work and in the Navy, she was one of the leading contributors to the development of one of the first calculators, as well as responsible for the first programming languages. While this is argued, she even coined the term "computer bug" when she found a moth causing problems in a computer. She was not only intelligent, but she was charismatic, a good speaker and educator. She was able to explain how computers worked by using a simple demonstration of a piece of wire a foot long- the equivalent of how far light travels in one nanosecond. She was a great woman, who pioneered in the sciences and technology. The fact that she was able to do so gives me hope and determination to achieve and achieve my dreams. Like her, I want to join the military and serve my country. I want to learn all I can and graduate from college. Most importantly, I want to make a contribution, whatever that may be. Grace Hopper was one of the most influential and dedicated women in the 20th century. She created opportunity for herself, and she opened the door for future generations of women to pursue such dreams. She has opened the door for me, and for that I am eternally awed and grateful.

- Julia Rowe

Fun and Games:



Secret Biographies

An a-maize-ing geneticist of the 1940's and 50's, this woman was the first woman ever to win an un-shared Nobel Prize. Her recognition for her work in Physiology or Medicine in 1983 was not the first, having also been awarded the Kimber Genetics Award and a Salute from the Genetics Society of America in the late 60's. Her theories on transposition (movement) of genes both between and on chromosomes in corn revolutionized genetics theories.

Send your answer and how she is inspiring to homs7c@yahoo.com. Please write in the subject line– Secret Biography.

The RCU reserved the right to publish the essays in the newsletter. All entries will not be returned to the author.

The winner will receiver a $20 gift certificate to Target.

Random Fun Facts:

A ball of glass will bounce higher than a ball of rubber. A ball of solid steel will bounce higher than one made entirely of glass.

The first Band-Aid Brand Adhesive Bandages were three inches wide and eighteen inches long. You made your own bandage by cutting off as much as you needed.

Word Scramble:

Atomnysro is noe of hte odelts siensce whit a sientiicf metohodl-gyo xisetngi ta het imte of ncieatn reGcee. onMenr tronsmyno sa rptisdcae is otn to eb onfcudes wthi satorgloy, hte ebiefl stemys htta tastse htat polepse' sentiyd nda umanh faifasr in gerlna rae coeltalrde to het ositionps fo elstialce bjecots ni hte skesi. oD uoy ikel stronAmyno? I od!

SUDOKU

Rules: You must place the numbers 1 thru 9 in the empty spaces. However, they must go 1 thru 9, not in the exact order, but each number must be in the row, horizontally and vertically. Each 3 by 3 square must also have 1 thru 9. But, the numbers can not repeat in any row, column, or box. Have fun and good luck!

	7					6		1
6				4				
			1			3		
	4	8				6		
		7	8	6			2	
3				9		5		
5	9		6		8		1	4
8						2	9	5
7	2		9				3	

Quote Corner:

What lies behind us and what lies ahead of us are tiny matters, compared to what lies within us.

-Ralph Waldo Emerson

Math Mania

A gasoline tank on a certain tractor holds 16 gallons of gasoline. If the tractor requires 7 gallons to plow 3 acres, how many acres can the tractor plow with a tank full of gasoline?

Answers From The Last Issue:

Secret Biographies: Grace Hopper

Math Mania: Harry is 17 years old.

Staff:

RCU Spotlight:

- Lisa Perez

Technical Corner:

- Lisa Perez

Fun and Games:

- Victoria Burg
- Elise Janowak

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- Julia Metzler
- Marie Schulmann

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Taken at RCU Championship Meeting, April 2005 by Barry Bohnsack

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Thank you for your hard work and support for the RCU.

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Patricia Chen - Adult Advisor
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Thank you for supporting of the Robot Chicks Union as we continue pursuing our mission.

To contact the newsletter email:
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For more information on the RCU, please contact:
info@robotchickunion.org

Our Website:
www.robotchicksunion.org
Yahoo! Group:
www.groups.yahoo.com/group/FIRSTRCU

****Deadlines****

All submissions must be submitted by June 3rd for the July Issue. Thank you for all your contributions.

Submit to:
homs7c@yahoo.com