



**Letter from the Officers:**

Dear Parents, Members, and Alumni,

As build season proceeds, during the third week we finalized our robot design and made progress on award submissions.

Both electrical and mechanical divisions have made achievements with the robot construction and game logistics. The CAD of the grabber mechanism and the reading, in C++, from the webcam in OpenCV were finalized. Also, we began working with the new navX MXP Navigation Sensor. We found success in designing and improving the rollers; thus, we now have the ability to control the orientation of totes without difficulty. Ultimately, we are proactively moving toward a promising design that we are prepared to showcase during the upcoming competitions.

Meanwhile in Operations, members are working on the first drafts of the Chairman's, Dean's List, Woodie Flowers and Entrepreneurship Award. If anyone has advice that we should keep in mind when submitting these awards, please let us know.

Thank you to all who attended our second design review on Sunday, January 17, 2015. This included a live demonstration, which resulted in helpful advice from our peers. The third design review's date will be announced as soon as possible.

As usual, we encourage parents to donate and contribute to the team as we progress through the season.

Thank you,

The MVRT officers

Archana Kikla (President),  
Andrew He (Vice President of Engineering),  
Chirag Toprani (Director of Mechanical),  
Lee Mracek (Director of Electrical),  
RJ Cunningham (Director of Engineering Data),  
Divek Toprani (Vice President of Operations),  
Michelle Danese (Director of Public Relations),  
Praxis Bays (Director of Outreach),  
Jeremy Chen (Director of Finance),  
Sophia Chen (Director of Media),  
Sydney Howard (Director of Documentations), and  
Shovik Guha (Webmaster)



**MVRT members brainstorm game plans**

**PLANNED COMPETITIONS**

March 12-14, 2015      Utah Regional

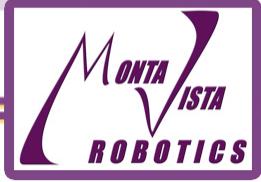
Salt Lake City, Utah

April 2-4, 2015      Silicon Valley Regional

San Jose State  
University

**UPCOMING EVENTS**

End of build: February 22, 2015



## DIVISION UPDATES:

### Mechanical:

- Beginning to refine our CAD in order to move forward with the design process
- Refining various prototypes
- This week, we will be creating the chassis

If you have any questions about Mechanical, please email [mechanical@mvr.com](mailto:mechanical@mvr.com)

### Electrical:

- Continuing to test sensors
- Getting ready to wire the final robot
- Working on PID drive control and the elevator
- Exploring filters for use in vision

If you have any questions about Electrical, please email [electrical@mvr.com](mailto:electrical@mvr.com)

### Engineering Documentation:

- Working with electrical to plan out functions for the driver station
- Used information from Design Review to improve robot design
- Continuing to document build

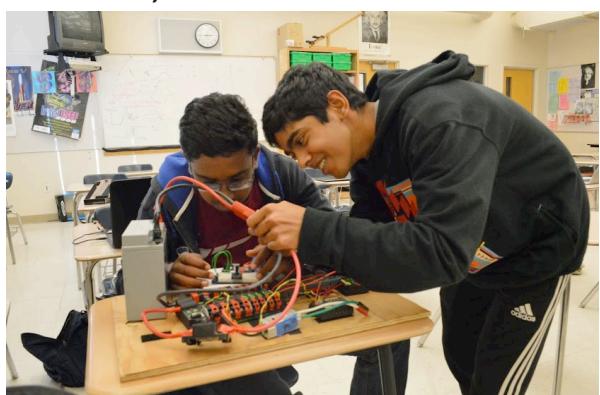
If you have any questions about Engineering Data, please email [engineeringdata@mvr.com](mailto:engineeringdata@mvr.com)



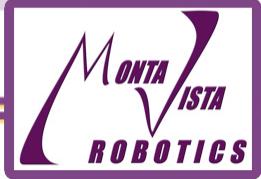
**Heather Baker and Chung Min Kim code together**



**MVRT members attend MV's first hackathon, MV Hacks**



**Shovik Guha and Akhil Palla carefully examining equipment**



#### **Public Relations/Outreach:**

- Updating MVRT's FIRST Aid Kit
- Completing the first draft of awards
- Continuing to work on Chairman's Award

If you have any questions about Public Relations or Outreach, please email [publicrelations@mvr.com](mailto:publicrelations@mvr.com)

#### **Finance:**

- Submitted grant applications for Western Digital and Applied Materials
- Drafting a business plan for the Entrepreneurship Award

If you have any questions about Finance, please email [finance@mvr.com](mailto:finance@mvr.com)

#### **Media:**

- Finalizing the MVRT button and t-shirt designs
- Working on the story animation

If you have any questions about Media, please email [media@mvr.com](mailto:media@mvr.com)

#### **Documentation:**

- Finalizing Chairman's Award theme
- Revamping the Chairman's binder
- Documenting all events

If you have any questions about Documentation, please email [documentation@mvr.com](mailto:documentation@mvr.com)

#### **Website:**

If you have any questions about the Website, please email [webmaster@mvr.com](mailto:webmaster@mvr.com)

3



**Jeremy Chen instructs his finance team**



**Nihil Muthaiah and Andrew He present robot prototype designs at last week's design review**



#### Meet the Mentors: Mrs. Laitinen

MVRT would like to thank Mrs. Laitinen for helping the team since 2003. We appreciate all the time and effort she puts into making MVRT the best it can possibly be. We thank her for putting up with all our silly jokes and making sure we are always on task. As the team mom, we always know we can count on her with anything!

She is truly an inspirational role model for all members of the team, and embodies the image of patience and honesty that MVRT strives to achieve. Without her, the team would be incomplete!

Thank you Mrs. Laitinen and all our mentors!



**Mrs. Laitinen conversing with Lee Mracek**

#### Parents' Booster Club:

Dear Parents,

We appreciate any snack donations!

Parent volunteers for carpooling to Utah are needed!

Please contact [utoprani@yahoo.com](mailto:utoprani@yahoo.com) if you are interested in being part of a MVRT parents' club.



**Rookie of the Week: Thank you Vivian Chiang (left) for contributing ideas and working diligently!**



FIRST Scholarship Opportunities (for juniors and seniors):

Every year, over \$20 million in scholarships are available to robotics team members through FIRST. These are underwritten by universities and businesses. Some scholarships are specific to a college or major; some are general. Not only does it benefit the team members, it also enhances the image of the team to be well represented with FIRST scholarships.

The majority of FIRST Scholarships require that a participant submits an application during his/her senior year of high school. There are, however a few FIRST Scholarship Providers who accept applications during an applicant's junior year, and even more importantly, Rensselaer Polytechnic Institute requires that an applicant apply during their junior year.

Please visit the FIRST Scholarship page: <http://www.usfirst.org/scholarshipsearch.aspx>

To learn about the other benefits, such as internships, that become available once you become a FIRST Alum! <http://www.usfirst.org/alumni>

**Deadline: 1/31/15-2/15/15**

Tulane University	\$15,000-\$30,000/year up to 4 years – science or engineering
Bart Kamen Memorial FIRST Scholarship	\$10,000 renewable - Biomedical Engineering or Premedical Studies, or medical school prep major (Biology, physics, Chemistry etc.)
Boston University	\$20,000/year up to \$80,000, plus research opportunity - College of Engineering
California State University, Los Angeles/Boeing	\$5,000/year up to \$20,000 – engineering
College for Creative Studies	\$1,000/year up to \$4,000 - Any course of study
Florida Institute of Technology	\$13,500/year up to \$54,000 - Any course of study
Johnson & Wales University	\$2,500/year up to \$10,000 - Any course of study in the School of Engineering & Design
Milwaukee School of Engineering	\$3,000/year up to \$15,000 over 5 years - Any course of study
Missouri University of Science and Technology	\$500/year up to \$2,000 - Any course of study
Oregon State University	\$1,500 non-renewable - Engineering
Portland State University	\$3,000/year up to \$12,000 - Oregon resident planning on studying Engineering or Computer Science
Rochester Institute of Technology	\$7,000/year up to \$28,000 - Any course of study
Rutgers, The State University of New Jersey	\$5,000/year up to \$20,000 - Any course of study
Seattle Pacific University	\$5,000/year up to \$20,000 - Any course of study
SUNY Polytechnic Institute	\$1,000 to \$5,000/year up to 4 years - Any Science, Technology, Engineering, or Math major



**Mechanical division makes progress on prototypes**

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**MVRT members during a casual day of build**