TH&VS Alumni Newsletter

November, 2014

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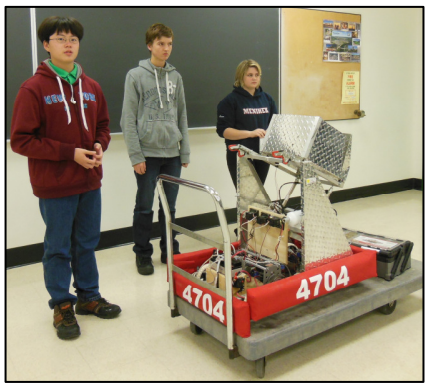
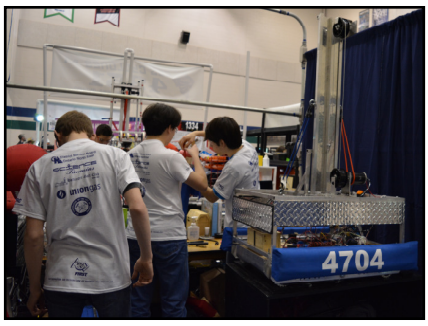


The first TH&VS robot that was created in 2013 for competition



The 2014 TH&VS Robot ready to compete against other robots

Robots Make an Appearance at TH&VS

If you had a robot that could do anything for you, what would it do? Would it serve you ice cold lemonade in the summer and mow your lawn? Would it do your taxes for you? Maybe you are too tired from the day's activities, so you need someone to walk the dog for you?

A robot can be loosely defined as any device that can move on its own. Did you ever play with Hot Wheels or maybe even a remote controlled plane? Robots are already all around us, some of them more complex than others.

This alumni newsletter features a new and exciting addition to the extracurricular program at TH&VS - robotics. This non-credit activity provides an opportunity for students to experience hands-on, meaningful problem-solving as they create a robot that will compete against other robots made by teams of high school students elsewhere in the province.

Message from the THAA Board

It was easy for the Board members of the Timmins High Alumni Association (THAA) to financially support the new robotics program at TH&VS. Our mission statement provided the direction:

"*The TH&VS Alumni Association is committed to advancing education through the provision of scholarships, teaching aids and equipment and by sponsoring educational programs at Timmins High & Vocational School.*"

Current Principal Greg Vinczewho is an advisor to the Board commented: "There is a lot of teamwork and no one person does all the work to make a robot operate. It takes the efforts of many different people who have a variety of skills to get the job done. Students gain valuable employment and life skills in a fun and educational way."

The next step was to share news with former students and friends of the school about this new extracurricular program at the school. It is yet another example of where TH&VS has provided leadership in an innovative program to meet the needs of students and prepare them with specific skills needed in the future.

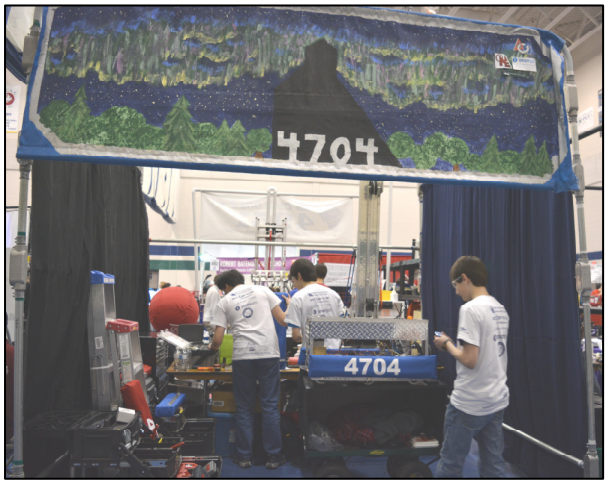
How the Robotics Program Works

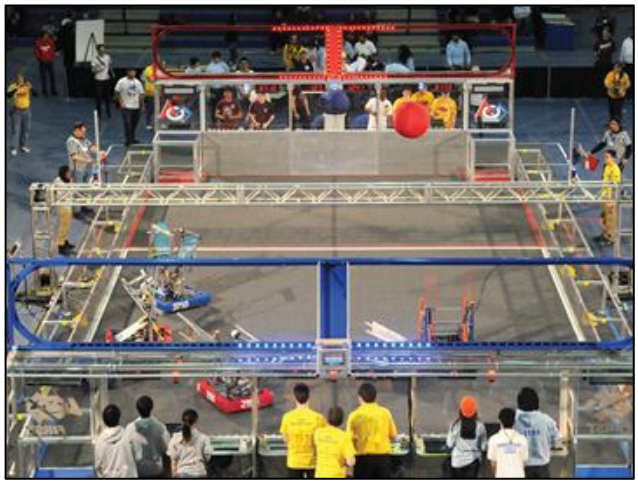
Students get to:

- *Build and compete with a robot of their own design*
- *Learn and use sophisticated software and hardware*
- *Work with professionals from the community who volunteer as mentors*
- *Compete and cooperate in alliances and tournaments*
- *Qualify for over $12 million in scholarships*

FIRST Robotics Competition (FRC) - How it Works

High school students team up to build impressive robots. Built from scratch in only 6 weeks outside regular classes, these 5' tall, 140 pound robots compete in high intensity robo-sports. The FRC combines the excitement of sport with the concepts of science and technology. Under strict rules, limited resources, and time limits, teams of approximately 25 students are challenged to raise funds, design a team "brand," develop teamwork skills, and then using a kit, build and program robots to perform prescribed tasks against a field of competitors. It's as close to "real-world engineering" as a student can get. Volunteer professional mentors lend their time and talents to guide each team in the building process. See pictures below.





What the TH&VS Students Said…..

In an interview recently, TH&VS students participating in the 2014 robotics program identified the following benefits for students:

- ✓ *increased self-confidence*
- ✓ *positive attitudes about taking on challenging tasks*
- ✓ *strengthened abilities to follow detailed instructions*
- ✓ *improved problem-solving and decision-making skills*
- ✓ *improved patience, dedication and persistence*

Beginning in September 2013, the TH&VS team worked together during lunch periods developing a business plan with each student being responsible for a particular area such as business, technology, safety, finances, etc. They picked up the FIRST robot kit in January and had just 6 weeks to design and create a robot to compete in a game. Advice from mentors and former Robotics students helped to smooth the process. The robot competed 11 times for points with the winning team going on to competition at the international level. The students gave back to the community during the school by year visiting elementary schools where they mentored younger students interested in technology.

Their opinions? "It was fun! We learned a variety of skills we will always use. We made a lot of friends and met interesting people. I'm better at planning and teamwork. It confirmed my future career."

How Are Robots Used in Our World Right Now?

Robots are assuming an increasingly important role in our society. In fact, they have been quietly moving into our factories, homes and hospitals, not to mention outer space. In Canada, there are 6 main areas of focus in robotics: space and underwater exploration, manufacturing, surgery, personal service, research, law enforcement and military defense. Robots have advantages over humans in such areas as strength, size, mobility, expendability, and the types of environments in which they can work. They are also cheaper, more precise and reliable, and can work faster and more efficiently than people.

Medicine - Robots permit more accurate and safe diagnoses and they can assist patients in rehabilitation. When compared to traditional large open incision or laparoscopic surgeries, the minimally invasive robot-aided surgeries provide increased benefits for patients including less pain, lower risk of infection, less blood loss and scarring, shorter hospital stays, faster recovery time and a quicker return to daily activities.

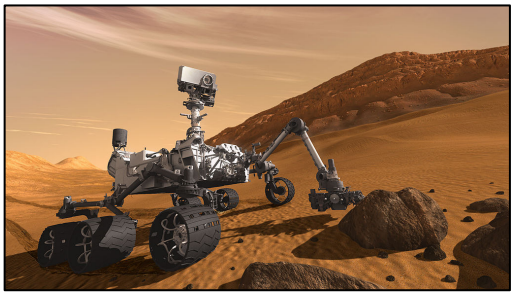
Manufacturing - Robots can help reduce manufacturing costs, increase efficiency and productivity.Robots can make automobile parts and put the car together while people supervise to make sure the machines work. They do many things faster than humans and more safely than humans too. China is the biggest market for robots with 1 in every 5 robots sold there. Japan has the most industrial robots of any country (300,000 in total).

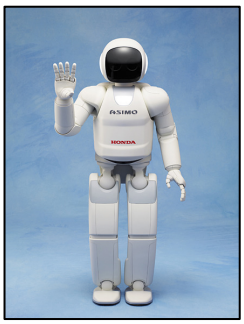
Underwater exploration - A remotely-operated vehicle (ROV) can locate and recover objects on the deep ocean floor. Mapping the ocean floor is an important issue for Canada especially in the Arctic Ocean.

Outer space - *Canadarm*, the Space Shuttle's robotic arm, has sent satellites into orbit and retrieved others for repair. It has inspected hard-to-reach areas for damage, knocked ice off the Shuttle's wastewater dumping vents and loosened a jammed solar array panel. It supports astronauts during spacewalks, ensuring their safety. Its elbow and wrist joint cameras have provided visual inspection of the Shuttle and its payload.

Home care or personal service - Robots can be designed to improve quality of life, e.g. the successful Roomba, a small vacuuming robot. In the future, a social companion robot could remind you to take your medicine, monitor your diet and exercise, play games with you, and help you connect with family members on the Internet.

Photo Gallery of Robots Used in Our World Now





Top left: *Canadarm*, a robotic arm developed in Canada and used on shuttle missions, is a proven valuable tool for many purposes in space exploration. Middle above: As of 2004, the NASA Exploration Rover robot has been sending back to earth scientific data about the environment on Mars. Top right: Autonomous underwater vehicle (AUV) of Memorial University in St. John's, Newfoundland currently used for undersea mapping and exploration. Bottom left: Honda engineers have created *Asimo*, a humanoid robot that can run, walk on uneven slopes and surfaces, climb stairs, and reach for and grasp objects. It can comprehend and respond to simple voice commands, so perhaps it could be used as a personal service robot in the future. .

A Closer Look at the THAA

WHO ARE WE? The Timmins High & Vocational School Alumni Association (THAA) is a non-profit charitable organization that was established in 1999 by a group of alumni and former staff members of TH&VS. Currently there are eleven board members and the TH&VS principal serves in an advisory role to the Board.

Three TH&VS students make a presentation about Robotics to the THAA Board in November 2013

WHAT DO WE DO? The THAA is responsible for the growth and income disbursement of the funds it receives yearly. In return, as a registered non-profit charity, it issues tax receipts for any donations. With input from the staff and administration, THAA provides approximately $10,000 annually in scholarships and funding for special projects such as the robotics program, athletic jerseys, upgrading audiovisual equipment in the theatre and providing white boards for classrooms. The THAA keeps its connection to TH&VS alive by producing an annual alumni newsletter, maintaining a website for TH&VS alumni (www.thvsalumni.ca) and supporting school reunions.

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Note: If you no longer wish to receive this TH&VS alumni newsletter, please reply to info@thvsalumni.ca with *"Please Remove"* in the subject line of the email.

THAA $$ at Work for TH&VS

Scholarships/bursaries are based on the interest generated on funds invested with the THAA by alumni. Approximately $10,000 is awarded to TH&VS graduates yearly.

Alumni Awards (2 watches)	Parker Arnold, Erik Frechette
Bruno Toffanello Memorial Scholarship	Neale Skinner
Ed Collins Scholarship	Sydney Gubbels
Elisabeth Johnson Bursary	Elliot Walker
Frank Graf Scholarship	Julia Bozecovich-Rowe
Hedy Graf Scholarship	Rebecca Dubeau
Lily Anderson Scholarship	Erik Frechette
Lions Club Gaston Melancon Humanitarian Bursary	Victoria Vezina
Lori-Ann Teixeira Memorial Scholarship	Riley-Rose Spigarelli
Margaret Clausi Scholarship	Margaret Kanya-Forstner
May Family Scholarship	Gemme Dell'Erede
Orlanda Scholarship	Michaela Delich
Rita Seccombe Art Scholarship	Jasmine Chenier
Ryan Reid Bursary	Zack Norman
Sean Graf Scholarship	Haley Rentschler
Shania Twain Scholarships (2)	Renee deBlois, Nathan Naveau
THAA scholarships	Parker Arnold, Michaela Delich & Erik Frechette

How to create a TH&VS scholarship?

The process for creating a scholarship for TH&VS students is an easy one. While there are several options depending on the size of the investment, most scholarships are based on the interest generated annually by the investment of funds with the THAA. At this time our investments are earning approximately 6% annually. As a charitable organization registered with the Canada Revenue Agency, we issue a tax receipt for the total donation. Contact ***info@thvsalumni.ca*** to receive further information.