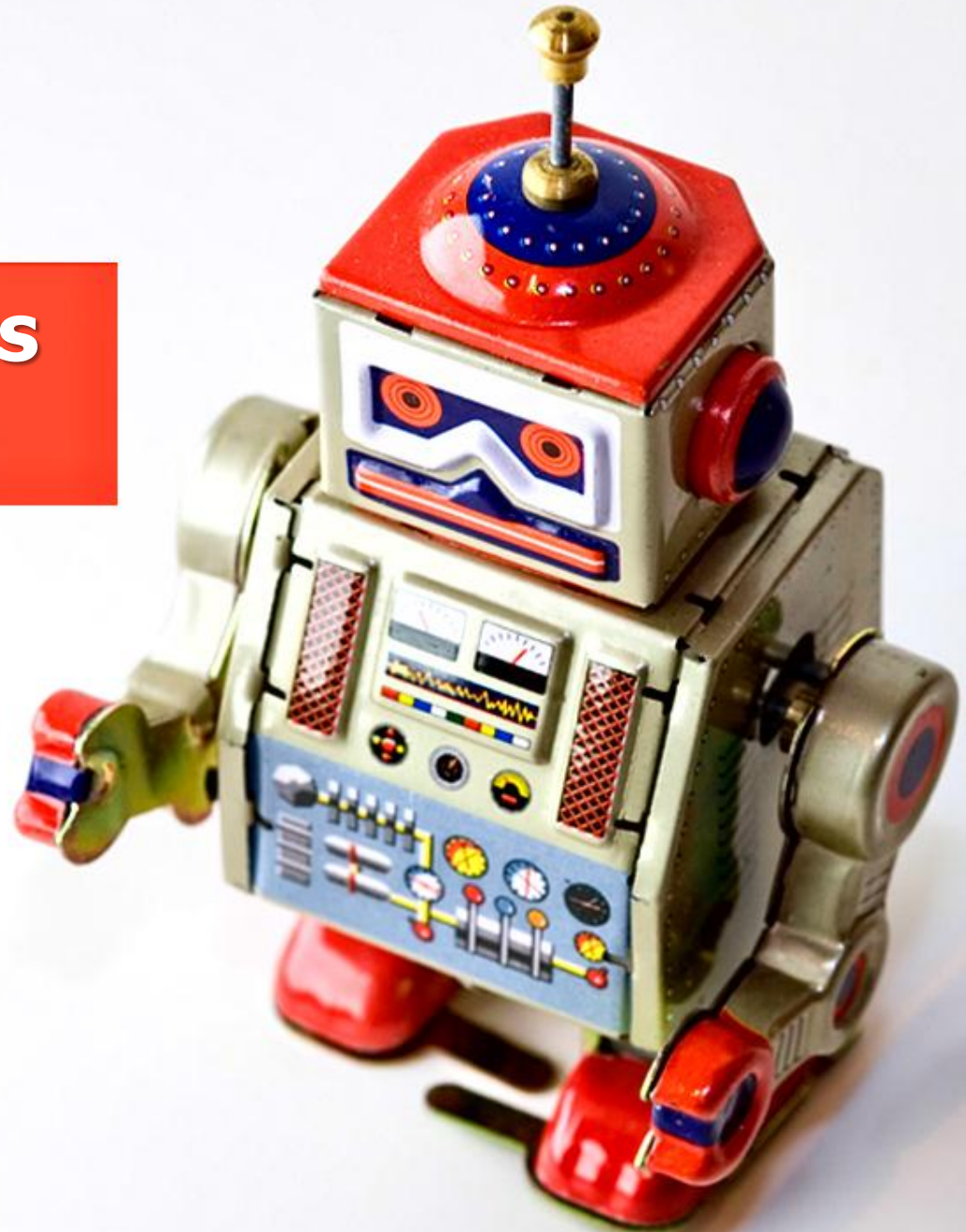


FIRST Robotics

Now Playing!



Who Am I

- *Keith E. Kelly*
CIT Developer Program
Northwestern Michigan College
Traverse City, MI
kkelly@nmc.edu
- *Background*
 - Electronics
 - Programming
 - CIT Developer Program
 - First Mentor – Team 1711



Objectives

- What is FIRST?
- Leadership and Support
- Programs
- First Robotics Challenge
- Updates from the Current Season
- Learning Opportunities



What is FIRST?

- Public charity - founded 1989

- Vision

"To transform our culture by creating a world where science and technology are celebrated and where young people dream of becoming science and technology leaders."

- Mission

Our mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.



Leadership and Support

- Dean L. Kamen - President, DEKA Research and Development Corporation
- Inventor, entrepreneur
- Advocate for science and technology
- Founded *FIRST* in 1989 to inspire young people's interest and participation in science and technology.
- Public charity designing accessible, innovative programs that motivate young people to pursue education and career opportunities in science, technology, engineering, and math.



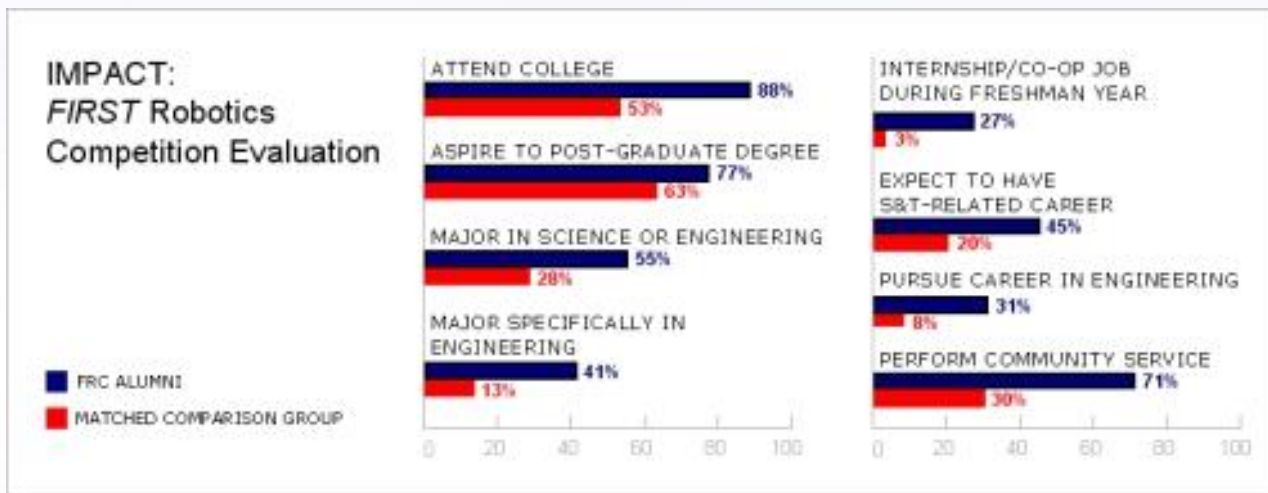
FIRST Values

- Gracious Professionalism
 - Coined by Dr. Woodie Flowers, Professor Emeritus MIT
 - encourages high-quality work
 - emphasizes the value of others
 - respects individuals and the community.
 - fierce competition and mutual gain are not separate notions
- Coopertition
 - displaying unqualified kindness and respect in the face of fierce competition.



Impact

- Brandeis University Study - *FIRST* Robotics Competition
 - Compared FRC participants to non-FIRST group with similar backgrounds, including math and science.
 - More than 3 times as likely to major specifically in engineering.
 - Roughly 10 times as likely to have had an apprenticeship, internship, or co-op job in their freshman year.
 - More than twice as likely to expect to pursue a career in science and technology.



Overall Reach

- All Programs Combined (2010/11 season)
- 248,000+ students
- 22,467 teams
- 20,667 robots
- 66,000+ mentors/adult supporters
- 33,000+ event volunteers



2011 *FIRST* Scholarship Program

- More than \$14 million in college scholarships
- 888 individual offerings
- 134 scholarship providers



Programs

- *FIRST* Robotics Competition for Grades 9-12 (ages 14-18)
 - 2,070+ teams
 - Robots are built in 6 weeks from a common kit of parts provided by *FIRST*, and weigh up to 120 lbs.
- *FIRST* Tech Challenge for Grades 9-12 (ages 14-18)
 - 1,500 teams
 - Robots are built using a modular robotics platform



Programs

- *FIRST* LEGO League for Grades 4-8 (ages 9-16; 9-14 in the U.S. and Canada)
 - 17,100 teams
 - Robots are built using LEGO MINDSTORMS technologies
- Junior *FIRST* LEGO League for Grades K-3 (ages 6-9)
 - 1,800 teams
 - Participants design and construct a model using LEGO bricks and moving parts and present their research on a poster

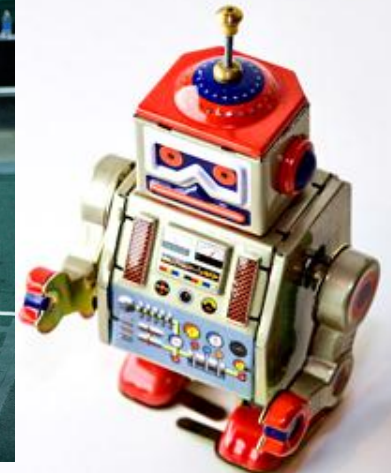
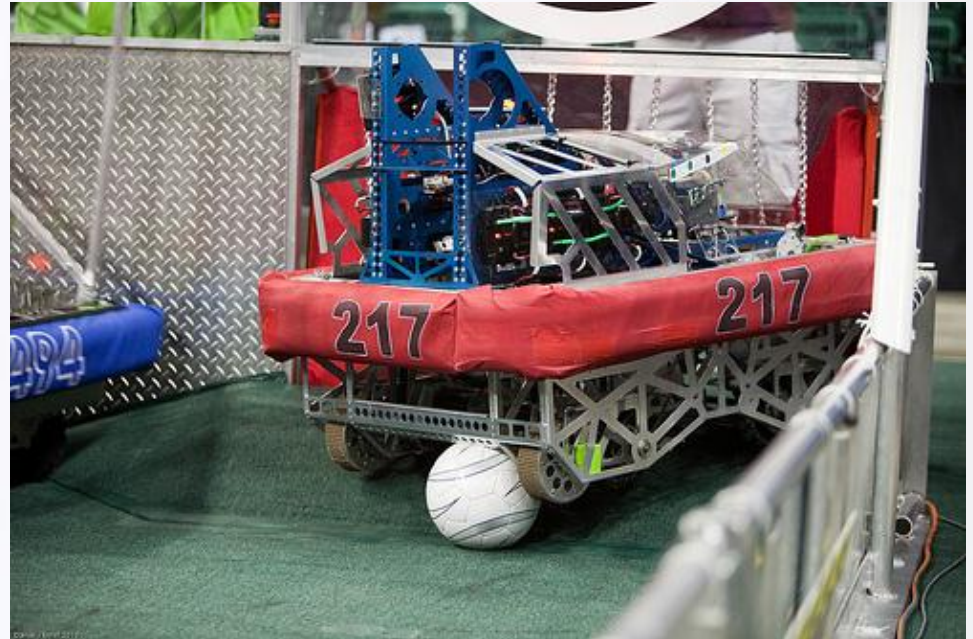


FRC Teams in Michigan

Michigan FRC Teams



Michigan Robots – 2010 Game



Now Playing - Logomotion



3 Weeks and Counting

Mentoring topics – so far!

- Magnetics
- Coefficient of Friction
- Torque
- Motor design
- Electrical power
- PID Controllers and broom handles
- Java base classes
- Private, Public, and Protected Variables
- Programming Delays and Threads
- Tank Drive and Moment arms



Team Updates

- <http://sites.google.com/site/1711raptors/>
- http://www.youtube.com/results?search_query=frc+2011+minibot&aq=f



Michigan 2011 Events

Event Name	Event Venue	Location	Date(s)
Kettering University <i>FIRST</i> Robotics District Competition	Kettering University	Flint	Mar 4-5
Traverse City <i>FIRST</i> Robotics District Competition	Traverse City Central High School	Traverse City	Mar 4-5
Waterford <i>FIRST</i> Robotics District Competition	Waterford Mott High School	Waterford	Mar 11-12
West Michigan <i>FIRST</i> Robotics District Competition	Grand Valley State University	Allendale	Mar 18-19
Detroit <i>FIRST</i> Robotics District Competition	Wayne State University	Detroit	Mar 18-19
Ann Arbor <i>FIRST</i> Robotics District Competition	Skyline High School	Ann Arbor	Mar 25-26
Niles <i>FIRST</i> Robotics District Competition	Niles High School	Niles	Mar 25-26
Livonia <i>FIRST</i> Robotics District Competition	Churchill High School	Livonia	Apr 1-2
Troy <i>FIRST</i> Robotics District Competition	Troy Athens High School	Troy	Apr 1-2
Michigan <i>FIRST</i> Robotics State Championship	Eastern Michigan University	Ypsilanti	Apr 7-9

All *FIRST* Robotics Competition events are free and open to the public.

More Information

- www.USFirst.org
- www.FirstInMichigan.org
- <http://www.youtube.com/user/FIRSTWorldTube#p/c/F952898665788873/22/zyavvQEDYW0>

