



RoboJackets

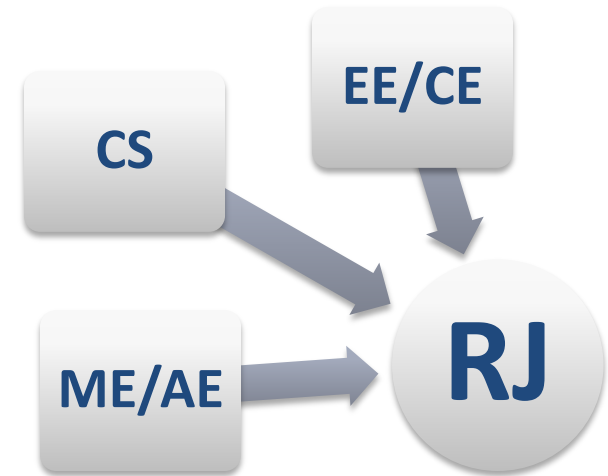
AUVSI Meeting
September 27, 2007

www.robojackets.org



Overview

- Student Organization
- Highly Multidisciplinary
- Undergrads & Grads
- Promote, Educate, Advance
 - Competitions, Outreach, Independent Projects





Activities



Competitions

- IGVC
- RoboCup
- BattleBots
- FIRST (HS)



Outreach

- TE Sessions
- FIRST (HS)
- RJ JumpStart



Independent Projects

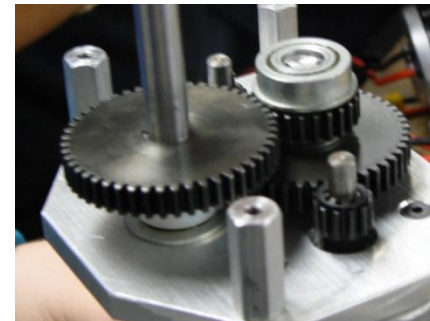
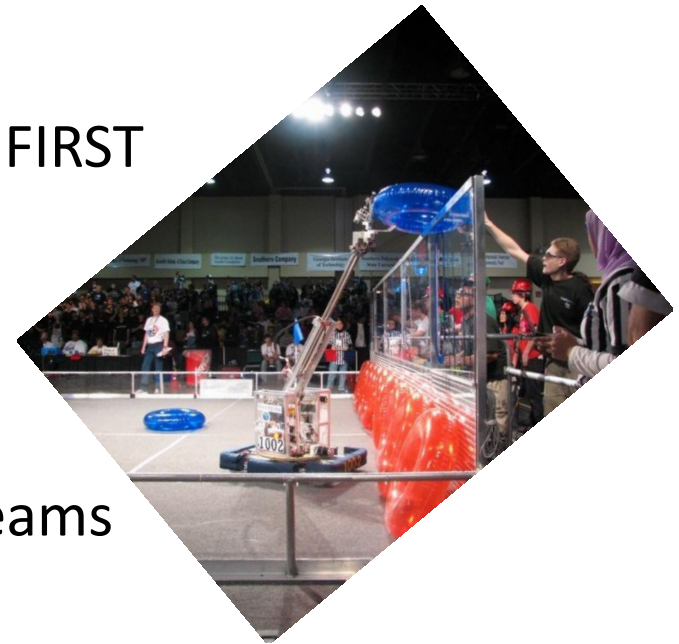
- HexaPod
- IK Arm
- Custom Roomba
- Sidewalk printer
- Downhill Car



Outreach



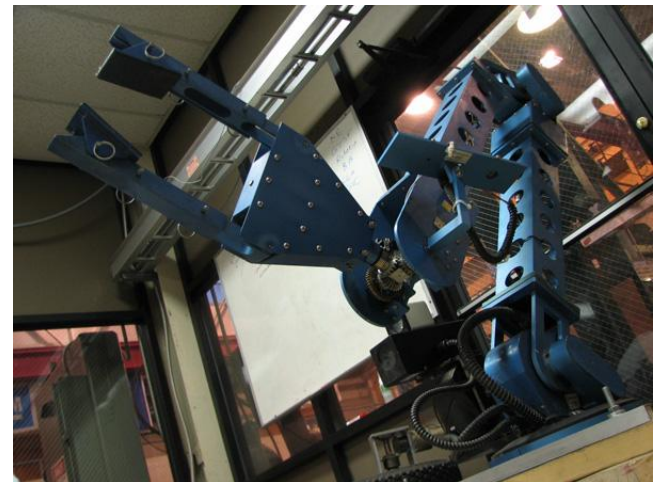
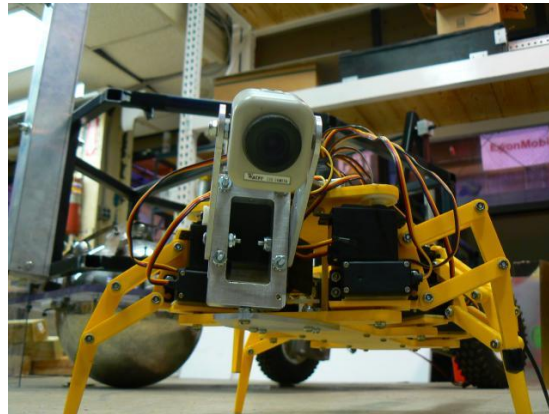
- Technology Enrichment (TE) Sessions
 - Teach skills necessary for success in FIRST
 - Engineering basics
 - Final competition w/ provided kits
- RoboJackets Jumpstart
 - Provide funding for build to a few teams
 - Grants
- FIRST
 - Build with Tech High School





Independent / Informal

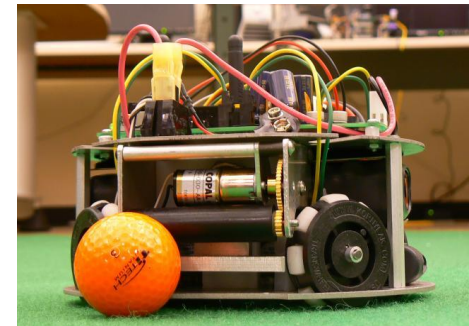
- Downhill Car
 - Dooley Derby (End of October)
 - Starlight Six Downhill Challenge
- HexaPod
- IKArm





Competition Teams

- IGVC
- RoboCup – Autonomous Soccer
- FIRST – Mentor High School
- BattleBots – Robotic Combat





IGVC



- AUVSI Competition
- Outdoor autonomous
- Our History
 - 2003 to 2004
 - 2006 to now
- 300 lb (largest)



IGVC – Current



- Sensors
 - Rear mounted camera
 - Laser range finder
 - GPS
- Control
 - Player – Server network
 - Reactive vision control algorithm
- Mechanical Base
 - 2007
 - Custom sphere castor
 - Differential drive
 - Independent suspension

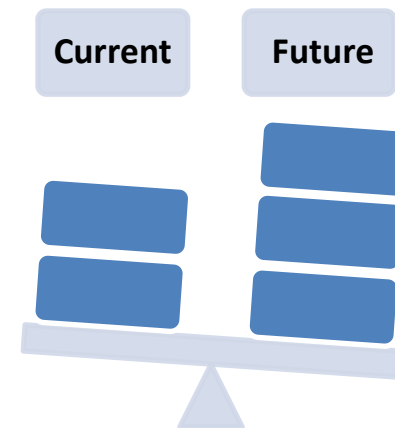




IGVC – Plans



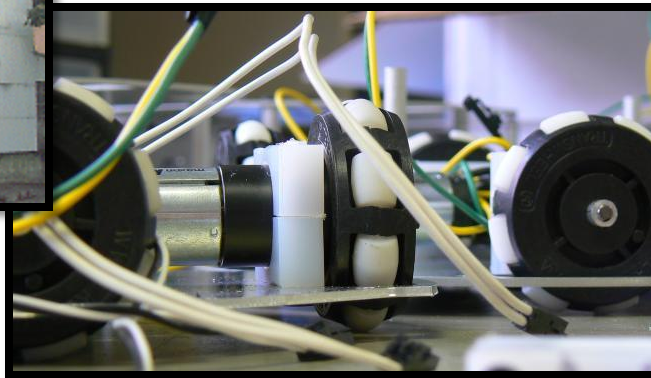
- 2008 Objectives
 - Intelligent power system
 - Full sensor suite
 - Internal system manager w/ telemetry
 - Internal world mapping
 - Path planning
 - JAUS Compliance
- Potential Assistance
 - SICK LIDAR
 - Differential GPS
 - Essential expenditures
 - Industry expertise
 - Technical Services & Parts





Demo Day – Open house

- Thursday, October 11, 2007
- See our shop and projects
- More info at <http://www.robojackets.org>





RoboJackets

Promote – Educate – Advance

www.robojackets.org