



**RoboJackets**

AUVSI Meeting  
September 27, 2007

[www.robojackets.org](http://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

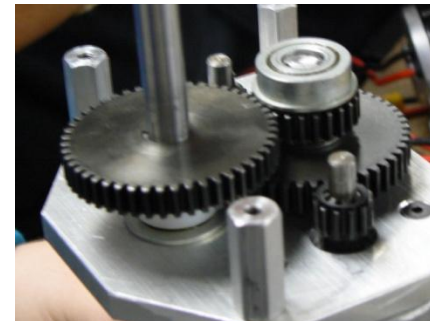
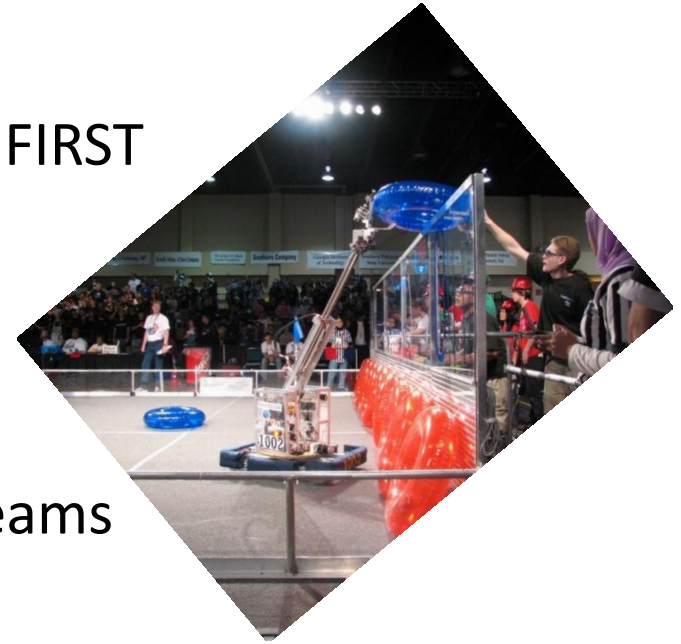
- HexaPod
- IK Arm
- Custom Roomba
- Sidewalk printer
- Downhill Car



# Outreach



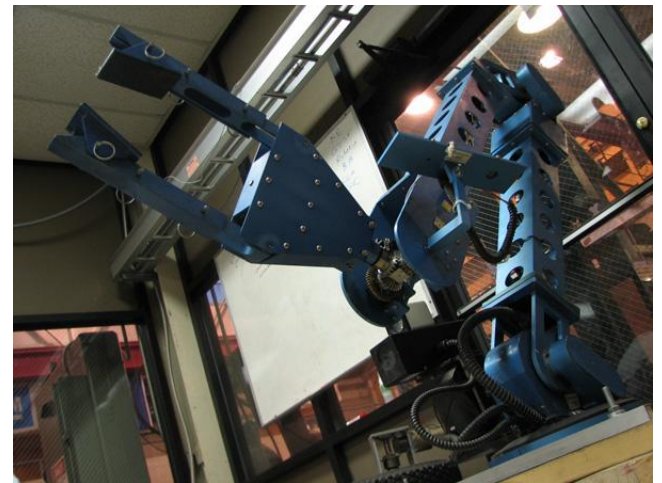
- Technology Enrichment (TE) Sessions
  - Teach skills necessary for success in FIRST
  - Engineering basics
  - Final competition w/ provided kits
- RoboJackets Jumpstart
  - Provide funding for build to a few teams
  - Grants
- FIRST
  - Build with Tech High School





# Independent / Informal

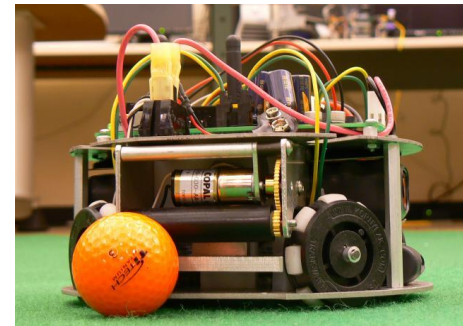
- Downhill Car
  - Dooley Derby (End of October)
  - Starlight Six Downhill Challenge
- HexaPod
- IKArm





# 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





# 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



**RoboJackets**

**Promote – Educate – Advance**

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