Outreach to Rookie Teams

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Outline

- Surge of growth in Boston
- Preseason workshops
- Kickoff
- The Build Season
- Preparing for Ship Day
- At the Regional
- Future Plans
- Benefits
About Team 246

- High School Students from Boston University Academy, a private high school part of Boston University
- Undergraduate Mentors from Boston University, including the Colleges of Engineering, Communications, and Arts of Sciences
- Boston University sponsors Team 246 to help out the students of the City of Boston
Reasons for Growth in the Boston Area

• New Boston Regional Competition held at Boston University
• Grant from the Smith Family Foundation used as seed money to start up new teams
• 18 Smith Family teams started
• Over twenty-five 1\textsuperscript{st} and 2\textsuperscript{nd} year teams in the Great Boston Area
Smith Family Foundation Grant

Background

- 300 Thousand Dollars
- Goal is to start FIRST teams in the city of Boston
- $11K Per Team
- Covered Registration Fee and start-up funds
- Bought certain tools (drill press, saws, tool kits)
- Teams required to find their own small grants
- Richard and Susan Smith Family
Preseason Training workshops

Workshop Content Includes:

- Managing a team
- Planning a Build Season
- Mechanical: Motors and the Drive Train
- Electronics: The basics
- Publicity
- Promotional Materials
- Sponsorship
More details of topics covered

- Two levels of workshops
- Mechanical
- Electrical
- Programming
- Pneumatics
Workshop Materials

- USB Key with all Power Points presentations
- Handouts on mechanical parts of robot
- Electronics handouts
- Programming information
- Catalogs from Forbes Marketing
- Our contact information
Promoting Preseason events

- MIT Bot Bowl hosted by Team 97
- Non-FIRST event
- Open Platform

- Sumo Bots at Museum of Science promoted by Machine Science
Local Remote Kickoff

- Hosted a remote kickoff event at Boston University
- Attended by 20 teams
- 200 people in attendance
- Welcomes by Local FIRST VISTA

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Supplemental Kit of Parts

- Provided to help start-up teams
- Information for guiding the build season
- Electronics needed to construct emergency stop dongle
- Drive bolts for the chassis
- Catalogs
Sponsors donating materials

Bolt Depot

Stock Building Supply

RadioShack Corporation

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Brainstorming Sessions

- FIRST Senior Mentor Steve Cremer led brainstorming sessions
- Mixed team sessions
Other Activities

- Pizza lunch
- Laboratory tours
- Safety workshops
- Distribution of kits and team photos
- Press releases
- Facilitated media presence
Podcasts: Tips, tricks, and support you need to have a successful FIRST Robotics Season!

- Used podcasts for 246 communication
- Used podcasts for rookie outreach
- Produced 30+ podcasts over the course of the build season
- Team Updates
- Calendar and planning
Making the podcasts

- Students wrote the content
- Students review the updates
- Variety of students recorded
- Opportunity to promote sponsors
Uploading the podcasts to iTunes

- 4 steps to producing a podcast
- Used a GCast account
- External Microphone to record external messages as an MP3 file, using Audacity
- Upload onto GCast
- Posted onto iTunes
Video tutorials

- Guided by mentor from College of Communication
- Students planned several topics and wrote scripts
- Eventually produced a tutorial on building a shipping crate
- Video tutorial was posted to YouTube
- Documentation posted on Chief Delphi
Crate Building Video Tutorial

- Showed the materials needed
- Showed how to safely cut the plywood
- Showed how to assemble the crate
Help Hotline

- Posted on our website
- Sent e-mail and other contact information to all rookie teams
  - bufirst@bu.edu
  - 617-358-3854
- Had daily hours when rookie teams could call for help
- Train students how to answer the phone
Practice Playing Field

- Built a practice playing field in school gym
- Used by rookie teams
- Gave teams a better idea of the challenge
- Used donated materials from Stock Building Supply
Open workshop weekend

- Allowed teams to come in every Wednesday and Saturday during the build season to work on robots parts
- Had 12 rookie teams use our laboratory during the final building weekend before ship day
Reasons why needed

• Many schools close down for February vacation
• Communal experience
• Machine shop
• Materials
• Veteran and professional expertise
Pit areas set up in classrooms

- Set up pit areas in classrooms
- Four teams per classroom
- Coordinated the needs of each team

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Machine Shop access

- Well-equipped machine shop in lab
- 2 Drill Presses
- Full-size CNC Bridgeport Milling Machine
- Table-top Micromark Milling Machine
- Table-top Micromark Lathe
- 2 Bandsaws
Access to materials

- Good way to donate and distribute old materials
- Extra stock materials
- Communal Home Depot Runs
Mentoring by Students and Engineers

- Several professional engineers stopped in to help
- Our students mentored and assisted other teams
- Additionally, several members of New England FIRST helped out including the Senior Mentor and Regional Director
Crane Building Workshop

- Stock Building Supply donated the lumber
- Bolt Depot Supplied the bolts and screws
- We supplied the tools and expertise and plans
- For two years, we have built over 10 crates per year
- Teams leave crates in the gym to ship out from there
Fed Ex

- Walked teams through the printing of Fed Ex labels
- Made one phone call to Fed Ex for all 19 teams
- Fed Ex appreciates having all crates in one location
- Assist teams in putting robots into crates
- Proper labeling, shrink wrap
Ship Day Press Conference

- Arranged for press release
- Arranged for photo opportunities
- Cuts down on competition between ship day events
- Allows an opportunity for Rookie Teams to shine at an event
At the Regional

- Roving pit crews
- Last minute reprogramming
- Full construction of robots
- Helped print shipping labels
- Arranged for a movie night
- Many Rookie teams performed extremely well, which was a proud moment for our team
What is next

• More workshops
• Fund Raising
• Off Season Cup League for the Fall
Benefits

• Building the FIRST Community
• Veteran team members feel a better responsibility to new teams
• Increased performance of the Rookie Teams
• Increased sustainability of the Rookie Teams
Feedback from the Rookies

- Team 246 has been so incredibly charitable, and given us so many supplies and such great advice, it's been completely indispensable. I know we couldn't have finished the robot without their help,” said Team 2162.

- Team 2127. “246 were really helpful, they were always right there when we needed it. It was really great that their students showed us what to do and taught us rather than just telling us the answer, we learned a lot”
More Benefits

- Sponsors more likely to support your team if you are doing outreach
- Our goal is to give 20% of all corporate funds raised to supporting rookie teams
- Corporations feel like they are not only supporting your 25 students, but hundreds of students
Awards Received

- 2007 Boston Regional Engineering Inspiration Award
- 2006 Johnson and Johnson Sportsmanship Award
Special Thanks

• Brad Lauer, Southern New England Regional Director
• Steve Cremer, Senior Mentor
• Greg Caswell, FIRST VISTA
• Sharon Kuhn, FIRST VISTA
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