

A SNAPSHOT OF FRC Workshops Held in 2010 & 2011

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The intent is that by posting these sessions, all teams can learn from each other.

NEMO takes no responsibility for content.

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***NOTE:** Not all presentations include a hyperlink. Search the Reference Key links to see if updates appear on website.

REFERENCE KEY

- [\[2010SD\]=San Diego 2010 Fall Workshops](#)
- [\[2010SCRA\] = 2010 Steel City Robotics Alliance](#)
- [\[2010FF\]= FIRSTFare](#)
- [\[2010MS\]= 2010 Minnesota Splash](#) ([Splash 2009](#) | [Splash 2008](#) | [Splash 2007](#))
- [\[2010BAA\]=Baltimore Area Alliance Fall Workshops](#) & [\[2011BAA\]](#)
- [\[2010IFRC\]=Indiana FIRST Robotics Conference](#)

(1) SYSTEMS ENGINEERING & PROJECT MANAGEMENT & DESIGN

[2011BAA] [Systems Engineering 101](#) -- *Bill Landin*

[2010-SD] Systems Engineering: What You Need to Know to Build a Competitive Robot - *Ric Robers (Mentor, Team 330 - The BeachBots/Chairperson, Los Angeles Regional)* Have you ever marveled at how simple the solution to a problem can be? When you go to the FIRST competition you see many different ideas and concepts, but which is best? A systems engineering approach will help you identify and solve the right problems and make your design much simpler. It will ease the design and build process and allow you to develop a more competitive robot. This is the same thinking that goes into a rover that has to operate on Mars, a car you see on the street, a rocket that will carry us into space or any complex system. It will teach you a systematic way to approach a problem and end up with an effective solution. FIRST robotics teams from California to New Zealand have used this method to design and build better robots. Based in aerospace industry, this hands on workshop developed by Teams 330 (Beach Bots) and 1138 (Eagle Robotics) will give you some tools you will be able to use to produce a winning design.

[2010FF] Project Management Project management is the organization, planning and management of group resources toward a specific, time-based goal; a discipline which many organizations fail to use effectively. Project leaders will learn to use concepts employed by Project Managers such as work breakdown structure, task dependencies and critical path. Following these and other concepts will not only allow teams more time and energy to complete the design and build process, but will allow a greater share of resources for necessary support functions like fundraising, sponsor relations, community outreach and earning awards. Presenters: Ejvin Berry & Chris Imondi Boeing Corporation. Presentation: [FIRSTFare 2010-Project Management](#)

[2011BAA] 365 FRC Systems Planning -- Ashley Cowell

[2010BAA] [Engineering Design](#) -- Anne and Steve Shade

[2010BAA] [FRC Project Management \(Tips and Tricks for a Successful Build Season\)](#) -- Sarah Montplaisir

[2010IFRC] [Designing A Robot - A Team Approach](#)

[2010IFRC] [Introduction To Basic Robotics Parts and Systems](#)

[2010FF] Robot Design, Brainstorming and Rapid Prototyping with 80/20 and QuickFrame

Learn how at least one team, 1540 the Flaming Chickens, designs their robot. From prototyping suggestions to appropriate use of robotic components, this seminar will provide you with all the know-how you need to make the idea in your head become reality. It will also cover the proper usage of 80/20 and Quickframe, a lightweight aluminum framing system that will allow your prototyping to be done efficiently and with less effort. Come see what designing a robot is all about! Presenter: Rohan Jhunjhunwala, Manager of Design, Team 1540

Presentations:

1. [FIRSTFare 2010-The Design Process and FIRST Robotics.ppt](#)
 - a. [FIRSTFare 2010-64715 fisher price \(johnson\).xls](#)
 - b. [FIRSTFare 2010-2010 Motor Data.xls](#)
2. [FIRSTFare 2010-8020 presentation.ppt](#)

(2) CAD

[2010MS] Virtual Prototyping with CAD - Kevin Tanner and Todd Kraft, PTC

When the FRC challenge is announced, it is imperative to the success of your FRC team that you hit the ground running with a tool that can help you conceptualize your designs quickly. To leverage that speed and develop many design options. To refine the best ideas quickly. And to start the build cycle smartly and efficiently. Creo Elements/Pro (formerly named Pro/ENGINEER Wildfire) from PTC is provided free to every FRC team and is the premier industry solution for this very challenge. Come learn how to get started. [Presentation \(PDF\)](#)

(3) DRIVE SYSTEMS & MANIPULATORS & MOTORS

[2010SD]Motor Performance - Andrew Keisic (Mentor, Team 294 - Beach Cities Robotics/Alum., Team 217 - The Thunder Chickens) This course is designed to give you the necessary knowledge to intelligently design gear ratios that accomplish the task without creating a cloud of smoke. It'll cover the governing equations of electrical motors, combining motors to create super motors and how to calculate gear ratios while giving you a tool to assist in the process.

[2010SD]Drive Systems - Rob Colatutto (Mentor, Team 1622 - Team Spyder)

This course is designed to give you the necessary knowledge to intelligently design a base. It'll cover base stability, ramps, center of gravity and various base setups and the pro and cons of each.

[2010FF] Drive Trains for FIRST Robots The drive train is the most important part of your robot yet many teams make some basic mistakes in their design and construction. This session compares 2 wheel, 4 wheel, 6 wheel, Mecanums, treads, and some of the unusual ones. We'll look at the

various transmissions and motors available to FIRST Teams. Vendors such as IFI, Skyway, and AndyMark will be discussed and audience members will share their experiences. Presenter: Dale Yocum. Robotics Program Director, Catlin Gabel School Team 1540. Presentation: [FIRSTFare 2010-Drive Trains](#)

[2010MS] Drivetrain - Members of Team 2169 If your robot doesn't move, you know you're in trouble. This informative seminar will cover drivetrains from the most basic to the advanced. Team members will be able to see and touch three different drivetrain options, and will learn about the tips and tricks of good drive train design. [Presentation \(.ppt\)](#)

[2010MS] Manipulator - John Titus, Team 2169 It happens every competition: Robots need to lift, store, move, position, and release various objects. Learn the tips and tricks of good manipulator design from this inventor and engineer. [Presentation \(.pps\)](#)

[2010SD]Mechanisms & Manipulators - *Andrew Keisic (Mentor, Team 294 - Beach Cities Robotics/Alum., Team 217 - The Thunder Chickens)* This course is designed to give you the necessary knowledge to intelligently design effective manipulators and lifting devices. It'll cover the pros and cons of various lifting devices, object perspective, object orientation, acquisition zones, hard stops and soft stops.

[2010IFRC] [Swerve Drive Decision Making](#)

[2010IFRC] [Hands On - FIRST Robotics Drive Base Build](#)

[2011BAA] [Motors 101](#) -- Mark Eastman, Matt Eastman

[2011BAA] [Drive Train Systems](#) -- Mark Eastman, Matt Eastman

(4) PROGRAMMING & SENSORS & CAMERAS

[2010MS] FRC Beta Software/Hardware - Minnesota FRC Beta Test Teams (1816, 2169, 2177, 2846) [C++ Changes \(.ppt\)](#) | [LabVIEW Changes \(.ppt\)](#)

[2010SD]C++ - *Kiet Chau (Mentor, Team 968 - RAWC)* Learn how to use C++ to program a FIRST Robot. Also, learn some of the C++ features that will help you get the most out of the hardware.

[2010SD]Java - *Eric Arseneau (Team San Diego) & Brad Miller (WPI)* Learn how to use JAVA to program a FIRST Robot. Also, learn some of the JAVA features that will help you get the most out of the hardware.

[2010SCRA] [Introduction to Java](#)

[2010SCRA] [Java for FIRST Robotics](#)

[2011BAA] [LabView 101](#) -- Jayesh Jariwala

[2010BAA] [LabView Introduction](#) -- Jayesh Jariwala

[2010SD]Intro to programming with Labview - *Richard Sisk (Mentor, Team 2493 - Robokong)* You've never programmed a robot before? Then this is the session for you. Learn the basics of robot programming in Labview including; how to use Labview, basic programming techniques, generating your first robot program.

[2010FF] LabVIEW Overview For those who want to know more about the programming language LabVIEW, this presentation offers an overview. It will discuss the salient features of the language which includes its being a graphical interface, its ability to create virtual world that can surround code to test that code, and that it is self-documenting. Also discussed is the fact that it is one of the very few “dataflow” languages which significantly aids in preventing ambiguous instruction paths which leads to efficient and rapid programming. By Dennis Erickson, 1510/2898 Mentor. Presentation: [FIRSTFare 2010-LabVIEW Overview](#)

[2010MS] LabVIEW Programming - Jed Retherford, National Instruments
Two LabVIEW presentations are offered.

LabVIEW I - The Basics LabVIEW has been the most popular programming choice for Minnesota FRC teams the last two years, with over 80% of teams choosing to program their robots with LabVIEW. This first session on LabVIEW is appropriate for anyone interested in programming for the first time, and also anyone who has some minimal familiarity with LabVIEW. We will get everyone familiar with the LabVIEW Environment, and get you some additional resources for learning more about LabVIEW.

LabVIEW II - Practical Development

This second LabVIEW session will build on the material covered in the first session, and is also appropriate for anyone who already has a basic familiarity with LabVIEW. We will talk about the LabVIEW FRC framework, and cover the concepts necessary for modifying and customizing the FRC project.

[Presentation \(.pptx\)](#) | [Sample LabVIEW Program](#)

[2010MS] Rookie Programming: Libraries and Robot C - Steve Waldo, Team 1816
C++ is a high level programming language supported by FIRST that many teams prefer for its performance and extensibility. This seminar will demonstrate the process of creating a default robot project in C++, provide an overview of C++ and the robotics libraries, review the changes to this year's libraries, and show how to make some of the most typical changes to the default robot project.

[Presentation \(.ppt\)](#)

[2010FF] Introduction to Java If you've never programmed in Java before or need a refresher, this session will give you a high level idea of what the language looks like and what this object orientation stuff is all about. This is a 1.5 hour talk followed by the latest on the Java Beta. Andrew Merrill, Computer Science Instructor at Catlin Gabel School and software mentor for team 1540. Presentation: [FIRSTFare 2010-Java-Introduction](#)

[2010FF] Java Beta Update Team 1540, was chosen as the NW team to beta test Java this year. Hear their insights about this new version of the language and what they've found so far. 30 minutes. Presenters: Andrew Merrill, Computer Science Instructor for Catlin Gabel School and mentor team 1540. Presentation: [FIRSTFare 2010-Java-Beta-2011](#)

[2010FF] Sensors for FRC Robots It seems that each year the use of sensors on the robot brings more to the game including the experience gained by students in integrating them. Working with the wide variety of sensors available becomes easier due to the ability to test and calibrate them using charts and graphs that is intrinsic with LabVIEW programming. Couple this with the ability to transfer real-time data to the dashboard, allows for a more realistic view of real world robotics. Daniel Bramblett, 1510 Student Programmer. Presentation: [FIRSTFare 2010-LabVIEW Sensors for FRC Robots](#)

[2010SD]Sensors - Sergiy Nesterenko This presentation will be an introduction to sensors in robotics. Sensors are key in both autonomous, and remote control robotics, allowing the robot to perform on it's own, or to assist the drivers with their task. Some of the discussed sensors will include gyroscopes, encoders, distance sensors, touch sensors, and camera vision. Some basic algorithms, and tips will be presented to help get valuable information from the sensors, and use them effectively. This will include the PID loop for locomotion, data analysis for distance sensors, and tips for better camera color recognition. This presentation is intended to introduce teams to the different sensors which exist, and get them on the right track in implementing some of these sensors in their own robots. Although the world of sensors may seem daunting, it is easier than it seems. All levels of expertise are welcome, from rookies to experts.

[2010MS] Veteran Programming: Vision System and Sensors - Max Veit, GO FIRST
This presentation will cover three areas of advanced robot programming: managing code versions using the Mercurial SCM system, creating simple and effective autonomous programs with sensor input, and using / customizing the LabVIEW Dashboard to display useful information about your robot. We will cover version control using the C++ and Java programming languages and the other two topics using the C++, Java, and LabVIEW languages. We will assume attendees have basic knowledge of robot programming including modifying a code template and building / downloading code to the cRIO controller.
[Presentation \(PDF\)](#) | [Presentation Notes \(PDF\)](#)

[2010FF] Creating Custom Dashboards The real-time dashboard in LabVIEW is one of the most exciting features to be included in the game. It provides status information on the robot itself as well as returns any or all sensor data for use in enhancing the driver's ability to make decisions during the game. With the inclusion of a video feed to the dashboard, the driver can have "eyes" just in front (or back) of the robot to help guide or in special cases have the robot seek on its own during the Autonomous or even in TeleOp sessions. Dennis Erickson, 1510/2898 Mentor Presentation: [FIRSTFare 2010-LabVIEW Creating Custom Dashboards](#)

[2010FF] Effectively Using the FRC Camera Using the camera both in the Autonomous and the TeleOp modes is becoming more exiting each year due to the relative ease in programming and managing video cameras. This presentation will review the last two year's video approaches including masking (capturing a scene and displaying only the target and its characteristics) and pattern recognition (viewing a scene and identifying a predefined mathematical object) using LabVIEW. Both approaches would return the distance the target is away, its direction relative to the robot and how many targets are in the camera's view. Amy Wiegand, 2915 Student Programmer. Presentation: [FIRSTFare 2010-LabVIEW Effectively Using the Camera](#)

(5) RADIOS & COMMUNICATIONS

[2010FF] FRC Radios and Communication This presentation will explore how the robot talks to the field during a match. We'll talk about tech specifics on the game adapters, the network communications as we understand them, how to avoid some common problems, and troubleshooting utilities. Faith Baynes, Catlin Gabel School System Administrator, FRC Field Admin. Presentation: [FIRSTFare 2010-Field Connectivity](#)

(6) ELECTRICAL & WIRING

[2011BAA] [Electrical Systems 101](#) -- *Tom Diviney*

[2010SCRA] [Electronics Best Practices](#)

[2010MS] Veteran Electrical and Wiring- Jon Stratis, Team 2177 This presentation is aimed at returning team members who are already familiar with the electrical subsystem of the robot and how to hook everything up. Concepts designed to make the robot simpler, more efficient, and easy to work on will be presented. Wire routing techniques will take center stage to help teams avoid the typical rats nest of tangled wires. Common problems and troubleshooting techniques will finish this presentation. [Presentation \(.ppt\)](#)

[2010MS] Rookie Electrical and Wiring- Jon Stratis, Team 2177 This presentation is aimed at new teams and new students interested in the electrical subsystem of the robot. Details of all the electrical components used on the robot will be presented, along with the correct way to wire them together. At the end of the presentation, every student will be able to wire together a working robot. [Presentation \(.ppt\)](#)

(7) PNEUMATICS

[2010FF] Pneumatics for FIRST Robots An introduction to the pneumatic parts used on FRC robots, engineering challenges and possible solutions. Calculations related to pressure, cylinder, compressor and force and torque needs will be introduced. Presenter: Craig Boezwinkle, Mechanical Engineer, Western Integrated Technologies and mentor to team 2811. WIT is a distributor, manufacturer, and integrator of Pneumatic and Hydraulic systems. Presentation: [FIRSTFare 2010-Pneumatics Presentation](#)

[2010MS] Rookie Pneumatics - Jon Meyer, Mechanical Engineering, University of Minnesota How rookie teams can get up and running with pneumatics, *FIRST*-style. [Presentation \(.ppt\)](#)

[2010MS] Veteran Pneumatics- David Cook, GO FIRST This presentation covers advanced topics related to pneumatics in *FIRST* robots, including the physics of fluid power systems, optimization of pneumatic circuits for best performance, advanced applications of pneumatic actuators, and how to wire and program pneumatic components. [Presentation \(.ppt\)](#)

[2010IFRC] [Pneumatics for FIRST Robots](#)

[2010BAA] [Pneumatics](#) -- [Pneumatics Resources](#) -- [Pneumatics Tips](#) -- [2010 Pneumatics Manual](#) -- [Pneumatics Basics](#) -- [Team 116, Lesson 7: Pneumatics](#) --
Mark Eastman

(8) SAFETY & INSPECTIONS

[2010SCRA] [Safety and Inspection \(plus additional resources\)](#)

[2010MS] Staying Out of Trouble with the Robot Inspectors - Jeff Pahl, Lead Robot Inspector A discussion of some of the most common problems teams have with passing inspection the first time, along with ways to avoid them, and other helpful tips. Presented by an eight-year team mentor and Lead Robot Inspector. Bag and Tag covered as well. [Bag and Tag Presentation \(.ppt\)](#) | [Inspection Presentation \(PDF\)](#)

(9) SCOUTING & STRATEGY

Karthik's Effective FIRST Strategies for Design and Competition:
http://www.simbotics.org/files/pdf/effective_first_strategies.pdf

[2010MS] Game Strategy - Danny Blau, GO FIRST Come learn the theory behind modern scouting systems, the differences in various systems, and the benefits to teams these systems can provide. Methods of constructing an Excel database to store and tabulate gathered data will be outlined and discussed. One aspect of this presentation will be the introduction of the 1st Scouting Alliance, its methods and philosophies.

[2010SD]Scouting - Kiet Chau (*Mentor, Team 968 - RAWC*)
Learn about scouting in FRC and why it's important.

[2010MS] Scouting Strategy: From Kickoff to Einstein - Danny Blau, GO FIRST
Executing a proper game plan strategy on the field begins during week one when designing the robot. Having a strategic plan from the beginning is key to success on the field. In this seminar, we will review the Post Kick-off Collaborative Strategic Design Meeting (PoKo Meeting). New this year, this meeting will give teams the ability to come together to brainstorm about the game, strategies, and components to be prototyped and used for the 2011 game.

[2010FF] Scouting & Competitive Analysis Scouting can make or break a competition. It can propel a team to victory, and can also spell defeat for an otherwise strong alliance. Regardless of your robot's performance, competitive analysis and strategy development are key for the success of any robotics program. This talk will cover the basics including: system development, management at the competition, strategy development and data interpretation, as well as the basic scouting resources that all teams should know. Following that, we'll explore more advanced topics like Offensive Power Rankings and more formulaic ranking systems. Henry Gordon, Competitive Analysis Manager and 2010 Dean's List Finalist, Team 1540 Presentation: [FIRSTFare 2010-Competitive Analysis and Scouting](#)

(10) WEBSITES

[2011BAA] [Website Design and Evaluation](#) -- *Bill Duncan, Mike Dennis, Peter Harris*

[2010FF] Website 101 for FRC Teams Get the word out about your team in a high impact way. See what you need to do to win a FIRST Web Site award, basic design principles and how to setup and manage a website. Some of the talk will focus on general website design and some will concern the use of WordPress as a content management system. Presenter: Bob Goetz, webmaster for www.oregonfirst.org Presentation: [FIRSTFare 2010-Website 101 for FRC Teams](#)

(11) FIRST STRUCTURE & OVERVIEWS & SUSTAINABILITY

[2010SD]FIRST: 2011 And Beyond - *Jim Beck (Western Regional Director, FIRST)*

This workshop will be conducted by Jim Beck our California regional Director for FIRST. Have you ever wondered what a district event is? When will we go to 5 or 6 regionals in California? Will we have State Championships in Calif? what is bag and tag and when will it come to San Diego?, what is a flex event? How will we get funding in 2011 and beyond? Come to this workshop and learn the new terminology and what it means to you and your team in 2011 and beyond.

[2010SD]FIRST Communications - *Steve Stark (San Diego Regional Planning Committee, Team 1266)*

[2010SCRA] [Introduction to FIRST](#)

[2010IFRC] [FRC History 2010](#)

[2010MS] Opening Presentation - Mark Lawrence, Team 1816, and Joe Passofaro, Team 2169 Sustainability is the most important issue facing *FIRST* teams in Minnesota. The seminar will address team funding, finding and retaining mentors, finding and retaining team leaders, recruiting students, and an outline of available resources. This seminar will also cover new FRC rules regarding shipping and Bag and Tag. [Presentation \(.ppt\)](#)

(12) MENTORING

[2010MS] Mentor Forum Q&A - Mark Lawrence, Team 1816, and Ken Rosen, assistant director, Minnesota *FIRST* This is an open forum for mentors to ask questions about anything that is on their minds. We will address questions on funding, mentoring, general team activities, the upcoming season, and more.

[2010BAA] [Mentor Roundtable](#) -- & [A Mentor Is...](#) -- Rose Young

(13) ROOKIES & TEAM ORGANIZATION

[2010SD]Rookie Workshop - *David Berggren (Assistant Western Regional Director, FIRST / Mentor, Team 1538 - The Holy Cows)* This rookie workshop will provide the participant with many of the tools that veteran teams use to navigate their way thru a FIRST robotics season. We will review in detail the FIRST website and discover very useful tools for new teams. The team and mentor and handbooks will be discussed in addition to tips on judging for rookies. Come join the workshop to validate what you know and learn new ideas to make your experience with FIRST truly positive.

[2010MS]Rookie Team Essentials - Team 2169

If you are just starting a team or want to move up to the next level, this seminar is for you. It covers everything from team organization to effective robot design. You will learn how to effectively plan for the build season and navigate the competition like a pro. An absolutely essential seminar for all rookie or 2nd year teams. [Presentation \(.pptx\)](#)

[2010MS] Rookie Survival Guide - Team 2169 Six weeks goes by in a flash. What your team need to do from inventorying the Kit of Parts to scouting at the regional competitions. Find out how to survive -- and thrive-- during your first season as an FRC team. [Presentation \(.pptx\)](#)

[2010SD]Team Organization - *David Berggren (Assistant Western Regional Director, FIRST / Mentor, Team 1538 - The Holy Cows)* Explore different organizational models that award winning teams have used and discuss how to sustain a team's knowledge and success year after year. Learn about year long activities that will help spread the word of FIRST and help raise money for your team.

Simbotics team resources: <http://www.simbotics.org/resources/workshops>

[2010IFRC] [Rookie Boot Camp](#)

(14) AWARDS & SCHOLARSHIPS

[2011BAA] [Judging 101](#) -- *Jenny Beatty*

[2010SD]Chairman's Award - *Jim Beck (Western Regional Director, FIRST)*

This workshop will deal with the 2011 Chairman's Award. Why eligible teams should submit a chairman's entry & how to prepare one; preparing your team for judging.

- Executive Summary – it's important, how to do it right
- Chairman's DVD - What's new/changed this year
- How to be prepared entering the judge room
- Share the impact FIRST has had on your community with the judges
- Demonstrate what you have done differently from last year to this year
- Tips for Success

[2010FF] Chairman's Award The Chairman's Award is the highest award bestowed to a FIRST Robotics team at the Regional and Championship competitions. It is based off of how a team demonstrates FIRST's ideals through community service, recruitment, mentoring, and gracious professionalism, along with other great team attributes. Discussion will include an introduction to the award, activities teams do to win the award, essay writing style, presentation tips, and sample questions. Rohisha Adke, Team 1540's Chairman's Manager. Team 1540 won the Chairman's award in 2010 and 2007, and the Engineering Inspiration award in 2008 and 2009. Presentation: [FIRSTFare 2010-Chairman's Award](#)

[2010SD]Talking To Judges - *Dona Sisk (Mentor, Team 2493 - Robokong)*

Who are those guys in the blue shirts that keep asking me so many questions? Learn how to interact with judges when they come by your pit. Why are they asking so many questions? How do you tell them about your team? Why are awards important anyway?

[2010SD]Award Submissions -*Molly Tremblay (Alumnus, Team 1538 - The Holy Cows)* Learn about how to write, edit and revise award submissions.

[2010SCRA] [How to Win Awards](#) *Sarah Douglas, Judge, Pittsburgh Regional*

[2010MS] Chairman's Award - Joe Passofaro and Team 2169 The Chairman's Award is *FIRST's* most prestigious honor. It goes to the team that "best represents a model for other teams to emulate, and which embodies the goals and purpose of *FIRST*." Presented in a fun and entertaining format, learn what your team needs to know to produce and present a "*FIRST* class" Chairman's presentation.

[Presentation \(.pptx\)](#)

[2010MS] Other *FIRST* Awards, Scholarships, Alumni Organizations - Renee Becker, GO FIRST GO FIRST members will review the many different awards FRC teams can win at regional events, other than the Chairman's Award, and the extensive resources that are available to *FIRST* teams. Alumni of *FIRST* will also give examples of the various scholarship opportunities that are open to *FIRST* students, and talk about how to remain involved with *FIRST* as an alumni. [Presentation \(.ppt\)](#)

(15) FUNDRAISING & BUSINESS PLANS & SPONSORS

[2010SD] Fundraising - *Phil Smith (CEO, Space Grant Institute)*

During this session we will explore how to create, manage and perform a fund raising campaign. We will:

- 1) review good ideas used by other FIRST Teams,
- 2) learn about INTERNET based resources,
- 3) learn how to approach commercial companies,
- 4) learn how to approach Not-For-Profit Foundations,
- 5) learn about forming your own 501c3,
- 6) learn how to work with an existing 501c3 and
- 7) finally, using templates the coordinator will provide create a sample Fund Request Letter and Foundation Proposal that is unique to your team.

[2010FF] Marketing Your Team for Successful Fundraising Learn how to create your team image and story so that your fundraising efforts are successful. Included will be tips on how to partner with industry, tactics for getting students in front of an audience plus giving an effective presentation. Topics will include messaging, marketing materials, elevator pitch, budget clarity and how to find sponsors as well as grants. Deb Mumm-Hill, FIRST Regional Director Presentation: [FIRSTFare 2010-FIRST Fundraising Toolkit DMH](#)

[2010FF] Grant Writing Tips Everything you need to know about writing grant applications to NASA, Platt and how to look for other grant opportunities. Deb Mumm-Hill, FIRST Regional Director Presentation: [FIRSTFare 2010-FIRST Team Grant strategies](#)

[2010MS] Fundraising - Michael Woolsey, Emily Benson, Team 1816

We will present a step-by-step walk-through of our fundraising process. We will cover how to find a sponsor, how to establish an ongoing relationship, how to properly thank sponsors and everything in between. Questions are encouraged throughout this presentation. [Presentation \(.ppt\)](#)

[2010IFRC] [Developing and Maintaining a Strong Sponsor Base](#)

(16) PARENT INVOLVEMENT & BOOSTER CLUBS

[2011BAA] [Parents - 101 Ways they can help your FIRST team](#) -- *Jenny Beatty*

[2010SD] How Parents Can Be Involved - *Julie Parker (Co-'Team Mom', Team 1538 - The Holy Cows) & Cathy Schulz (Co-'Team Mom', Team 1538 - The Holy Cows)*

Learn how to get parent support through communication, enthusiasm, fundraising, donations of supplies, team building support, adult networking, mentoring, etc...

[2010IFRC] [Organize a 501\(c\)3 Parent Group](#)

(17) SPIRIT/MARKETING/COMMUNICATIONS

[2010BAA] [Branding, Publicity and Fundraising](#) -- Sharlene Brown and Bill Duncan

[2010IFRC] [Imagery](#)

[2010MS] Team Spirit - Stephanie Hornung, GO FIRST

Contrary to popular belief, in *FIRST*, attitude is everything. In fact, the successful teams are always the ones that aren't afraid to show how awesome they are. Team spirit is more than just yelling during competitions. A team that has fun together will build a better robot together, and your team's image may be the reason you're remembered when it's time to pick alliance partners. This seminar will cover steps to build team spirit and a solid team identity before kickoff, during build, after build, at competitions, and post-season. [Presentation \(.pptx\)](#)

[2010MS] Marketing Communications - Gene Jasper, Team 2498

The Marketing Communications presentation will review basic marketing strategies and communication methods for FRC teams. Renee Becker from GO FIRST will review basic marketing strategies, specifically looking at audience and branding aspects with examples from other successful teams. Ze Thao and Lamar Roberts from Team 2500 Herobotics will review the marketing side of their team and the documents they use to market their team. Miel Jasper from Team 2498 Bearbotics will show the team newsletter that allows them to communicate within the team, with their sponsors, and with other teams in *FIRST*. [Presentation \(.ppt\)](#)

[2010SD] Elevator Pitches - Monte Lyons (Team 3476 - Code Orange)

Learn about how to develop an effective elevator pitch

[2010SCRA] [Government Relations](#)

[2011BAA] [Branding & Entrepreneurship](#) -- Ashley Cowell

**Thanks to all who responded to the call for links via
www.chiefdelphi.com!**