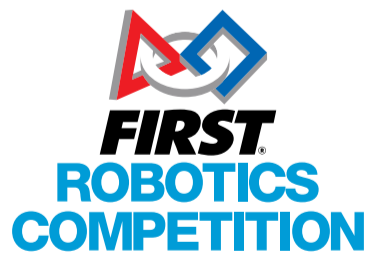


2016 *FIRST*[®] Robotics Competition

Administrative Manual



200 Bedford Street
Manchester, NH 03101, USA
<http://www.firstinspires.org/frc>

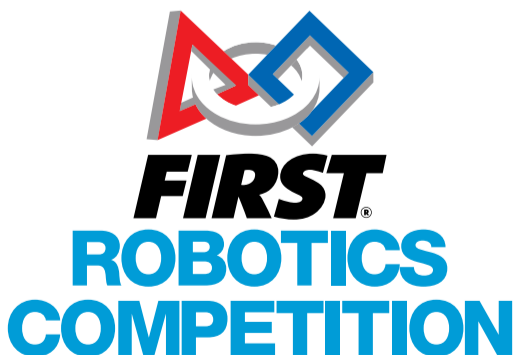
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1

Introduction

1.1	ABOUT <i>FIRST</i> [®]	2
1.2	What is the <i>FIRST</i> [®] Robotics Competition [®]	2
1.3	Gracious Professionalism [®] , a <i>FIRST</i> Credo	2
1.4	Coopertition [®]	3



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1 INTRODUCTION

1.1 ABOUT *FIRST*[®]

FIRST[®] (For Inspiration and Recognition of Science and Technology) was founded by inventor Dean Kamen to inspire young people's interest in science and technology. Based in Manchester, New Hampshire, *FIRST* is a 501(c)(3) not-for-profit public charity.

FIRST provides four programs:

- *FIRST* Robotics Competition for grades 9-12, ages 14-18
- *FIRST* Tech Challenge for grades 7-12, ages 12-18
- *FIRST* LEGO League for grades 4-8, ages 9-14 (ages 9-16 outside of North America)
- *FIRST* LEGO League Jr. for grades K-3, ages 6-9

Please visit our website: www.firstinspires.org for more information about *FIRST*'s programs.

1.2 What is the *FIRST*[®] Robotics Competition[®]

This Varsity Sport for the Mind™ combines the excitement of sport with the rigors of science and technology. Under strict rules, limited resources and time limits, teams students are challenged to raise funds, design a team “brand”, hone teamwork skills, and build and program robots to perform prescribed tasks against a field of competitors. It's as close to “real-world” engineering as a student can get.

The *FIRST* Robotics Competition pairs high school students with adult mentors (primarily engineers and teachers) to design and build robots that compete against one another in a high energy environment. Each January at the Kickoff, a new, challenging game is introduced. These exciting competitions combine the practical application of science and technology with the fun, intense energy and excitement of a championship-style sporting event. Teams are encouraged to display *Gracious Professionalism*[®] and to help other teams and cooperate while competing – known as Coopertition[®]

In 2016, the *FIRST* Robotics Competition will reach 78,000 high-school students representing approximately 3,100 teams. Teams come from nearly every state in the United States, as well as many other countries. *FIRST* Robotics Competition teams will participate in over 50 Regional Competitions, more than 60 *FIRST* Robotics Competition District Competitions, and 8 District Championships. In addition, approximately 600 teams will qualify to go to the *FIRST* Championship at the Edward Jones Dome in St. Louis, MO.

This year's game will be presented at the 2016 *FIRST* Robotics Competition Kickoff on Saturday, January 9, 2016.

At the Kickoff, all teams will:

- see the 2016 game field for the first time
- learn about the 2016 game rules and regulations
- receive a Kickoff Kit to provide a starting point for all teams

1.3 *Gracious Professionalism*[®], a *FIRST* Credo

Gracious Professionalism[®] is part of the ethos of *FIRST*. It's a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

Gracious Professionalism is not clearly defined for a reason. It can and should mean different things to everyone.

Some possible meanings of *Gracious Professionalism* include:

- Gracious attitudes and behaviors are win-win
- Gracious folks respect others and let that respect show in their actions
- Professionals possess special knowledge and are trusted by society to use that knowledge responsibly
- Gracious Professionals make a valued contribution in a manner pleasing to others and to themselves

In the context of *FIRST*, this means that all teams and participants should:

- Learn to be strong competitors, but also treat one another with respect and kindness in the process
- Avoid leaving anyone feeling as if they are excluded or unappreciated
- Knowledge, pride and empathy should be comfortably and genuinely blended

In the end, *Gracious Professionalism* is part of pursuing a meaningful life. When professionals use knowledge in a gracious manner and individuals act with integrity and sensitivity, everyone wins and society benefits.



“The *FIRST* spirit encourages doing high-quality, well-informed work in a manner that leaves everyone feeling valued. *Gracious Professionalism* seems to be a good descriptor for part of the ethos of *FIRST*. It is part of what makes *FIRST* different and wonderful.”

- DR. WOODIE FLOWERS, NATIONAL ADVISOR FOR *FIRST*

It is a good idea to spend time going over this concept with your team and reinforcing it regularly. We recommend providing your team with real-life examples of *Gracious Professionalism* in practice, such as when a team loans valuable materials or expertise to another team that they will later face as an opponent in competition. Routinely highlight opportunities to display *Gracious Professionalism* at events, and encourage team members to suggest ways in which they can demonstrate this quality themselves and through outreach activities.

1.4 Coopertition®

At *FIRST*, Coopertition is displaying unqualified kindness and respect in the face of fierce competition. Coopertition is founded on the concept and philosophy that teams can and should help and cooperate with one another even as they compete.

Coopertition involves learning from teammates and mentors. Coopertition means competing always, but assisting and enabling others when you can.

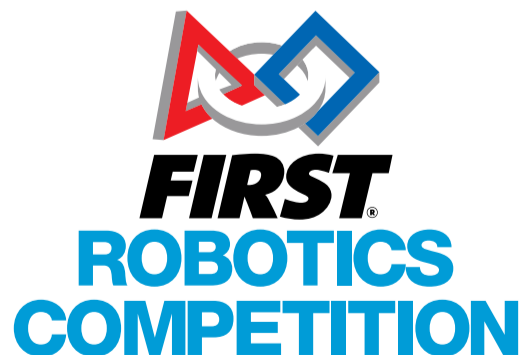


PLEASE take the time to read the sections of this manual. It was prepared with YOU in mind and is a great resource for important information you will need throughout the season!

2

Team Resources

2.1	Overview.....	2
2.1.1	<i>FIRST</i> [®] Headquarters Team Support - Contact Information	2
2.2	Team Support	2
2.2.1	Please Do Not Duplicate Efforts.....	2
2.3	Technical Resources.....	2
2.3.1	Getting Answers To Your Competition Questions	2
2.3.1.1	<i>FIRST</i> Robotics competition Q&A Forum	3
2.3.1.2	Email Blasts.....	3
2.3.1.3	<i>FIRST</i> Robotics Competition Blog	3
2.3.1.4	<i>FIRST</i> Robotics Competition Social Media.....	3
2.3.1.5	<i>FIRST</i> Robotics Competition Behind the Lines.....	4
2.3.1.6	<i>FIRST</i> Robotics Competition Site Information Documents	4



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2 TEAM RESOURCES

2.1 Overview

The following section provides information on how to contact *FIRST*[®] Headquarters and suppliers throughout the season in addition to the methods in which *FIRST* communicates important season information to teams. In this section, you will learn about where to locate team resources relating to the competition, registration and more.

2.1.1 *FIRST*[®] Headquarters Team Support - Contact Information

You can reach *FIRST* Team Support via email, fax, mail or phone. The office is open Monday through Friday from 8:30 AM to 5:00 PM, Eastern Time. Information about *FIRST* Robotics Competition is also available on our website: www.firstinspires.org.

When contacting us, please be sure to provide your TEAM NUMBER on all communications!

Email Address	FRCTeams@firstinspires.org To facilitate a quick reply, please include your team number in the subject line
Fax Numbers	(603) 666-3907 (Main) (603) 206-2079 (Finance)
Mailing Address	200 Bedford Street, Manchester, NH 03101
Phone Number	(603) 666-3906 ext. 0 (800) 871-8326 ext. 0 (Toll Free)

2.2 Team Support

The Team Support (Operations) Group is eager to answer your program and season-related questions. Please call or email us with any questions you may have – we look forward to helping you!

2.2.1 Please Do Not Duplicate Efforts

Team Support is able to answer most inquiries within 48 hours. Being a small group, we must work efficiently to ensure that issues are resolved in a timely manner. For this reason, we ask that you kindly do not contact or copy multiple people about the same problem. If your question requires immediate assistance, please do not hesitate to contact us by phone.

2.3 Technical Resources

Information regarding the 2016 Control System, including software and hardware, as well as other technical resources, will be available after Kickoff. For additional information, please see the [Kit of Parts](#) webpage.

2.3.1 Getting Answers To Your Competition Questions

Most answers to questions about the game can be found in the Competition Manual and Team Updates:

- **Competition Manual:** Sections relating to the game will be posted after Kickoff.
- **Team Updates:** After the 2016 Kickoff, *FIRST* will post Team Updates online. Team Updates provide rule updates, important information about parts and administrative reminders/deadlines. Please note that some updates will result in *FIRST* publishing revisions to manual sections.

NOTE: Please be sure to check these website locations often during the build season to ensure that you have the latest information!

In addition, we recommend visiting the *FIRST* Robotics Competition page on our website: www.FIRSTinspires.org/roboticsprograms/frc. Here, you can find answers to administrative questions, along with links to other areas of support.

Tip! Check deadlines and dates for TIMS, award submissions, grants, registration and payments and more on the FIRST Robotics Competition Season Calendar. In addition, you can find links to the Competition Manual, Robot Transport information and more on the FIRST Robotics Competition Game & Season info page.

2.3.1.1 FIRST ROBOTICS COMPETITION Q&A FORUM

After Kickoff, *FIRST* provides an online forum for questions and answers (Q&A). This is the only official place to get answers to your game questions. Please click [here](#) to access the 2016 *FIRST* Robotics Competition Q&A System.

2.3.1.2 EMAIL BLASTS

Email blasts are important communications that *FIRST* sends to team contacts identified in [TIMS](#). Email blasts remind teams of important deadlines, updates, and other timely *FIRST* Robotics Competition information.

FIRST archives the email blasts on the *FIRST* website at the [News and Email Blasts](#) page.

FIRST will typically send one program email blast on the Thursday of each week throughout the *FIRST* Robotics Competition Season and on Tuesdays during competition event weeks.

In addition to the *FIRST* Robotics Competition Email Blast, Rookie Email Blasts will be sent to rookie teams periodically on Tuesdays during registration and throughout the *FIRST* Robotics Competition season.

2.3.1.3 FIRST ROBOTICS COMPETITION BLOG

The [FIRST Robotics Competition Blog](#) should be read weekly for additional important updates.

2.3.1.4 FIRST ROBOTICS COMPETITION SOCIAL MEDIA

If your team has access to Twitter, we encourage you to follow [@frcteams](#), the official Twitter account for the program.

We also encourage teams to “like” the official *FIRST* Robotics Competition Facebook page, <https://www.facebook.com/FIRSTRoboticsCompetition>. This is in an effort to connect our community to the online world and form relationships among teams, mentors/coaches, volunteers, educational entities and sponsors.

Additionally, *FIRST* Robotics Competition has an official You Tube channel which hosts a variety of videos and online content. The channel can be accessed here: <https://www.youtube.com/user/FRCTeamsGlobal>.

2.3.1.5 *FIRST* ROBOTICS COMPETITION BEHIND THE LINES

Behind the Lines is a collaboration between *FIRST* Robotics Competition and [GameSense](#). The purpose of this series is to make key knowledge and resources available to the community through an engaging hour-long show. The *FIRST* half is a presentation by the invited experts, followed by a Q&A session on the topic. Each Behind the Lines session will be hosted by the GameSense Crew. For more information on when the show takes place, please click on the following link: <http://www.FIRSTinspires.org/roboticsprograms/frc/behind-the-lines>.

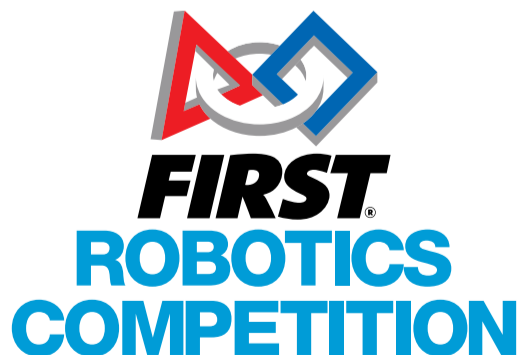
2.3.1.6 *FIRST* ROBOTICS COMPETITION SITE INFORMATION DOCUMENTS

We encourage all teams to read over the Site Information Document specific to their event. The “Site Info” documents are a good reference for team load-in/load-out instructions as well as other venue specific instructions. These are located on the following link: <http://www.FIRSTinspires.org/team-event-search>.

3

Team Organization

3.1	Overview.....	2
3.2	Youth Protection Program	2
3.3	Suggested Leadership Roles	2
3.3.1	Lead Mentor 1 Responsibilities	3
3.3.2	Lead Mentor 2 Responsibilities	4
3.3.3	Shipping Contact Responsibilities.....	5
3.4	Recommended Additional Contacts.....	6
3.4.1	Corporate / University Contact Responsibilities.....	6
3.4.2	Public Relations Contact Responsibilities	6
3.4.3	Scholarship Contact Responsibilities	6
3.4.4	School Contact Responsibilities.....	7
3.4.5	Technical Contact Responsibilities.....	7
3.4.6	Travel Contact Responsibilities.....	7
3.5	Other Important Team Positions	8
3.5.1	Game Rules Monitor Responsibilities.....	8
3.5.2	Safety Captain Responsibilities	9



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3 TEAM ORGANIZATION

3.1 Overview

This section provides teams with information regarding team organization. It is up to the individual teams to make decisions on how they would like to organize their teams. This section is here to provide guidance on how to organize your team.

3.2 Youth Protection Program

FIRST strives to create an environment in which team members can grow, learn and have fun with minimal risk of injury. *FIRST* maintains a Youth Protection Department (*FIRST* YPD) for the purpose of fulfilling its commitment to protecting youth.

Coaches and Mentors are expected to read the Youth Protection Program Guide, available [here](#).

Information on the US Screening process is available [here](#).

Information on the Canadian Screening process is available [here](#).

You can find an FAQ section and additional information about the *FIRST* Youth Protection Program on the *FIRST* website [here](#).



3.3 Suggested Leadership Roles

Developing a team leadership structure that assigns clear roles and responsibilities is the first step to organizing your team. Once complete, it will be much easier to prepare for the season, unify and manage the team, stay current with important information, and meet season deadlines. Your team is encouraged to align its leadership structure with the contact requirements of the Team Information Management System ([TIMS](#)—outlined in the tables below). Although we encourage the following guidelines, team structure is the team's prerogative and the following are only suggestions.

Examine the roles and compare recommended qualities and abilities with your mentors from a *FIRST* perspective. Please remember it is essential that team members and mentors share the workload!

3.3.1 Lead Mentor 1 Responsibilities

The Lead Mentor 1 is the primary contact who provides team information to *FIRST* and undertakes key actions on behalf of the team via [TIMS](#). It is recommended this role be filled by the lead mentor of the team. This person may choose to delegate some of the responsibilities listed below, but should still be up to date with their progress and ensure their completion. This position must be held by an adult team member 18 years old or older.

Award Submissions:	Assign student awards submitters in TIMS. Ensure submissions of Woodie Flowers, Chairman's, and other Awards by the respective deadlines. Find details in Section 6: Awards .
FIRST Robotics Competition Blog:	Monitor the <i>FIRST</i> Robotics Competition blog for "behind the scenes" news and updates here .
Calendar of Important Deadline Dates:	Monitor the <i>FIRST</i> website calendar for changes, additions here .
Communications	Read <i>FIRST</i> Communications, Team Updates, <i>FIRST</i> Robotics Competition Blog, etc. (see below). Ensure team is educated on important information. Contact <i>FIRST</i> Team Support with any questions.
Consent and Release Forms:	Ensure all team Consent and Release Forms are submitted. Please refer to Section 4.7.1 Consent and Release Forms for more information regarding the Consent and Release form. Review : http://www.firstinspires.org/resource-library/youth-team-member-consent-and-release-form
Contact Information:	Keep all contact information up to date in the TIMS Team Profile Section. Provide his/her accurate email address, mailing address, and phone number to allow timely communication with <i>FIRST</i> , especially for use during vacations or team travel.
Email Blasts:	Receive, read and share email blasts with team. Email blast archive page located here .
Event Information:	Register team for events in TIMS
Judges' Information:	Enter judges' information into TIMS by deadline
Kit and Kickoff Information:	Submit selections in TIMS by deadline
Robot Transportation:	Invite Shipping Contact to team, or assume role. Ensure the Shipping Contact is actively learning the rules and making plans to transport your team's robot. Also ensure the team is meeting all shipping deadlines.
Safety:	Work with team's Safety Captain to ensure team member safety. Review <i>FIRST</i> Safety Policies/Procedures.
Scholarship Opportunities:	Invite team Scholarship Contact in TIMS.
Team Profile:	Maintain and update Team Profile Information in TIMS to reflect correct team contacts, partner organization, team demographic information.
Team Updates	Reads Team Updates posted here .
TIMS (Team Info System):	Maintain and update team information via TIMS .

Track Twitter Feed/ Facebook Page:	Monitor the <i>FIRST</i> Robotics Competition Twitter Feed and Facebook Page for announcements about updates, news and important information. Twitter / Facebook
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Tip! If team contacts are using school email addresses, please make sure the school's firewall allows emails from frcteams@firstinspires.org.

3.3.2 Lead Mentor 2 Responsibilities

The Lead Mentor 2 is the Lead Mentor 1's "right hand" and shares in providing and maintaining accurate information in TIMS, as well as providing leadership to the team. The Lead Mentor 2 should read and share in the responsibilities of the Lead Mentor 1 as outlined above. Generally the Lead Mentor 2 assumes the Lead Mentor 1 role should the Lead Mentor 1 not be able to fulfill his/her duties. This position must be held by an adult team member 18 years or older. Key duties of the Lead Mentor 2 are outlined below:

Calendar of Important Deadline Dates:	Monitor the Calendar of Important Deadline dates for changes, additions here .
Communications:	Receive and distribute relevant <i>FIRST</i> communications to team members.
Chairman's Award	Collect information about, and document, the successes and accomplishments of the team. Organize the Chairman's Award (CA) submission for the team and help prepare the CA presentation to be given to the judges at the event. Please refer to Admin Manual, Chapter 6 – The Awards, for more information about the Chairman's Award.
Contact Information:	Provide current contact information for TIMS, including an alternate phone number and address in case <i>FIRST</i> has to make contact during vacation or while the team is traveling.
Public Relations:	Confer with Lead Mentor 1. Notify Public Relations (PR) Contact of any upcoming team fundraising or events.
Robot Transportation:	Be familiar with the robot transportation responsibilities in case the Shipping Contact needs help. Can also assume role of Shipping Contact.
Safety:	Work with team's Safety Captain to ensure safety while working and traveling.
Support:	Provide any support the Lead Mentor 1 or team may need.
TIMS (Team Info System):	Assist Lead Mentor 1 with maintaining and updating team's TIMS record.
Vacation Coverage:	Assist Lead Mentor 1 with receiving communications and handling team issues during vacation periods.

3.3.3 Shipping Contact Responsibilities

The Shipping Contact is a critical position on the team, as this contact is responsible for handling robot transportation, Bag and Tag, and receiving any items shipped from *FIRST* to the team (i.e., a replacement part). The Main or Lead Mentor 2 can be assigned to the role of Shipping Contact, or they may invite a separate Shipping Contact via the invitation process in TIMS.

Communications:	Receive and read <i>FIRST</i> email blasts, read the <i>FIRST</i> Robotics Competition Blog and the Team Updates. Communicate with <i>FIRST</i> on any robot transportation related questions.
Contact Information:	Provide the Lead Mentor 1 or 2 with current contact information for TIMS, including a valid phone number to enable <i>FIRST</i> contact during vacation times or when the team is traveling.
FedEx Donation	Receive and safeguard any shipping paperwork the team is given concerning travel to Championship or if you have been granted a Robot Transportation Exemption. The FedEx donation can save your team hundreds of dollars on shipping your robot. Carefully guard the shipping documents. Use the shipping paperwork as specified in Chapter 5 of this manual.
Kit of Parts (KoP):	<p>NEITHER <i>FIRST</i> NOR FEDEX WILL REPLACE LOST SHIPPING DOCUMENTS.</p> <p>If your team opted to pay for your Kickoff Kit shipment (i.e., selected the “Team Pays” choice in TIMS), confer with Lead Mentor 1/Lead Mentor 2 to ensure that the shipping address in TIMS is correct.</p> <p>If your team wants to pick up the kit, make sure the Lead Mentor 1 meets the deadline for this TIMS entry.</p> <p>Designate an adult mentor to pick up the kit at a Local Kickoff.</p> <p>If your team wants to designate another team to pick up the kit, make sure the appropriate Surrogate Kit Pickup paperwork is delivered to <i>FIRST</i> by the deadline as indicated on Calendar of Important Deadline Dates here.</p>
Robot Transportation	<p>Read Chapter 5 - Robot Transportation in the <i>FIRST</i> Robotics Competition Team Competition Manual as well as review supplemental instructions as directed in that chapter.</p> <p>Be familiar with and conform to the following:</p> <p>Bag and Tag requirements and procedures</p> <p>Deadlines and requirements for shipping your robot crate, if you are traveling to Championship or have been granted an Exemption for a regional event</p> <p>Customs requirements if you travel over a border</p> <p>Other requirements that pertain to your particular team situation</p>
TIMS Team’s FedEx, UPS or USPS Account Number:	<p>Provide the Lead Mentor 1 or Lead Mentor 2 with a shipping account number for TIMS. Incorrect Shipping Account numbers could directly impact the missing, defective, or broken parts replacement system for your team.</p> <p>Sponsor/school may let team use its shipping account, or obtain a number from the companies’ websites.</p>

3.4 Recommended Additional Contacts

3.4.1 Corporate / University Contact Responsibilities

This contact provides information about the team to the University or Corporation sponsoring the team. Keeping the sponsor/partner informed of team progress and achievements throughout the season is a great way to ensure their support.

Communications:	Receive related team emails. Provide information to team if necessary.
Contact Information:	Provide an alternate phone number and address in case <i>FIRST</i> needs to make contact during vacation or while the team is traveling.
Public Relations:	Notify university/sponsor contacts of any upcoming team fundraising or events. Let supporters know about trials and successes regarding the robot design and build. Get them excited right through the process and continue providing information throughout the year. Invite them to an event.

3.4.2 Public Relations Contact Responsibilities

Advertising the team's goals and accomplishments is critical. The Public Relations Contact works with the team to ensure that the community and sponsors are apprised of the team's progress and accomplishments.

Communications:	Receive relevant <i>FIRST</i> communications and reply when necessary.
Contact Information:	Provide up to date contact information to the Lead Mentor 1 for TMS.
Fundraising:	The team would be wise to advise this person of any fundraising activity or team appearances at least two weeks before the date so that advance notification of the event can be prepared and sent to media contacts.
Public Relations Updates:	Responsible for receiving and disseminating any PR updates issued by <i>FIRST</i> , and using them to the team's advantage in local newspapers, as well as TV/radio stations.
Sponsors:	Send any PR information to current sponsors all during the year, and prepare "marketing" materials to attract potential new sponsors.

3.4.3 Scholarship Contact Responsibilities

This team contact is responsible for disseminating information about *FIRST* Scholarships to the student *FIRST* Robotics Competition team members and their parents. It is HIGHLY RECOMMENDED that a Scholarship Contact is assigned to the team and entered in TMS!

Communications:	Receives key scholarship information from <i>FIRST</i> and shares information with team students and parents. Contact <i>FIRST</i> about any scholarship related inquiries. Information on scholarships may be found on the Scholarship webpage .
Contact Information:	Provide up to date contact information for TMS. Provide an alternate phone number and address in case <i>FIRST</i> needs to make contact during vacation or while the team is traveling.

3.4.4 School Contact Responsibilities

This adult representative is responsible for knowing and enforcing all school rules regarding team participation. A teacher or principal may be best qualified for this role to facilitate the team's progress and meeting deadlines.

Communications:	Receive school -related team emails. Provide information/reply if necessary. Monitor Award due dates, which are posted on the FIRST Robotics Competition Season Calendar . Please refer to Section 6 (6.1 FIRST Robotics Competition Awards) for detailed information on FIRST Robotics Competition Awards.
Contact Information:	Provide up to date contact information for the Lead Mentor 1 in TIMS
Public Relations:	Notify Public Relations Contact of any upcoming team fundraising or events. Confering with Lead Mentor 1.
Safety:	Stress safety whenever possible.
Scholarships:	Inform students early about scholarship opportunities and deadlines, and encourage and assist those interested in applying for them. Information on scholarships may be found on the Scholarship webpage .

3.4.5 Technical Contact Responsibilities

This person will assist the team with technical issues and problems related to engineering.

Communications:	Receive team emails. Reply with inquiries as necessary. Keep the rest of the team apprised on your technical successes/issues. Ask for help/ideas.
Contact Information:	Provide up to date contact information for TIMS. Provide an alternate phone number and address in case <i>FIRST</i> needs to make contact during vacation or while the team is traveling.
Pre-Transport Inspection:	Work with the team members to perform a robot inspection before your robot is packed for transport or sealed in its bag. Use the Inspection Checklist that will be posted after Kickoff. This inspection will show where problems are so you can correct them before transporting your robot. It will also provide the students with information they will need to know during the on-site, pre-competition inspection since the inspectors will be asking the students questions.
Public Relations:	Notify Public Relations Contact when your robot nears completion or when you have an opportunity to show off your robot. If the PR contact is not available, notify local media of any upcoming team fundraising or events. Plan these opportunities with your Lead Mentor 1.
Safety:	Stress safety and ensure safe working conditions, safety glasses use, etc.

3.4.6 Travel Contact Responsibilities

This person will make event(s) travel and hotel arrangements for the team members and mentors. Tackle this task early to ensure there is room on preferred flights and in preferred hotels.

Communications:	Receive relevant <i>FIRST</i> communications and communicate with <i>FIRST</i> and team as necessary.
Contact Information:	Provide up to date contact information for TIMS . Provide an alternate phone number and address in case <i>FIRST</i> needs to make contact during vacation or while the team is traveling.
Hotel Reservations:	Make any necessary travel reservations for competition events, including the Championship.
Manual and Website:	Refer to the "Site Info" document on the website for special travel/parking instructions. Bring the directions for the venue.
Travel Pricing:	Obtain, consider, and compare travel costs prior to registering for an event(s). The web has many opportunities to compare airfares. Ask for group rates to see if that is a good option. Is bussing an option?

3.5 Other Important Team Positions

Your team may want to consider appointing one or several Game Rules Monitors and Safety Captains. Students are welcome to fill these positions if the team members and mentors agree and find responsible candidates. *FIRST* does not need their contact information in TIMS.

Please read below for some job-related roles these students or adults may want to fill.

3.5.1 Game Rules Monitor Responsibilities

Know Point System:	Be sure the team understands the system; implement the best strategy.
Know Penalties:	Be sure all mentors and operators know and understand all penalties.
Learn Game Rules:	Read and understand the rules of the game and communicate them to the team members so they know the ins and outs of the game.
Learn Web System:	Check the online Manual for rules, changes, and web-based question and answer system. Online manual is here . Q&A is here .
Monitor Team Updates:	Communicate any changes, written in the updates, to the team. Team Updates are here . News and Email Blasts are here .

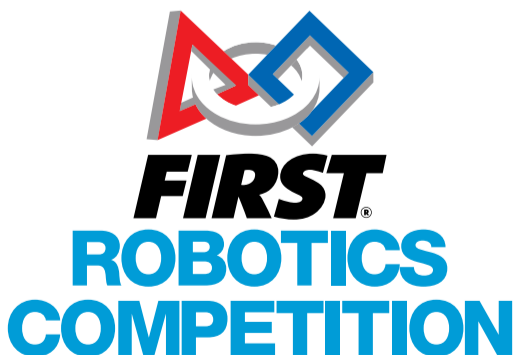
3.5.2 Safety Captain Responsibilities

<p>At the Events:</p>	<p>Bring enough safety glasses for the team and all guests. Make sure persons unpacking or un-bagging robot will have glasses to wear as they arrive at the Pit, and make sure all persons wear safety glasses/goggles properly.</p> <p>Be sure your team transports and lifts the robot safely.</p> <p>Know where the EMT area is, and report any injuries to the Pit Supervisor at the time of injury or treatment.</p> <p>Discourage running in the Pit or Competition Arena, and work with the green-shirted Safety Advisors to keep things safe and the Pit aisles clear.</p> <p>Bring any serious safety infractions, such as metal grinding or open flames to the attention of the Pit Supervisor, as well as any blatant discourtesies.</p>
<p>Home/Work Site:</p>	<p>Obtain enough safety glasses for the team. Ensure all persons wear them when working on the robot or in the “work” vicinity. People who wear glasses must have regulation safety glasses with side shields or wear safety goggles over their glasses.</p> <p>Make sure the work area is safe and the floor is clear at the team’s workplace and at the events.</p>
<p>Read Competition Manual:</p>	<p>Read Section 4.3 Courtesies and Rules. Meet with team members and decide what the team deems important in the safety area. Diplomatically enforce their findings.</p>
<p>Read Team Safety Manual:</p>	<p>Print and read the “FIRST Robotics Competition Team Safety Manual”, which can be found here. Meet with the team and go over the manual with everyone.</p>
<p>Safety Policies:</p>	<p>Review Safety Policies and Procedures in the “FIRST Robotics Competition Team Safety Manual” and inform the team of the mandates and suggestions. Encourage all team members and mentors to read the document, follow the suggestions and become familiar with the safety awards.</p> <p>Suggest that the team build a robot cart if they don’t have one.</p>
<p>Use Courtesies:</p>	<p>At all times, think and behave with a Graciously Professional® attitude.</p> <p>This position is one that makes teams aware of safety issues and inspires team members to improve safety conditions. <i>FIRST</i> works hard to ensure a safe environment and encourages others to do so as well. Use common sense and good judgment when bringing an infraction to someone’s attention. Please be kind and positive because the Safety Captain is an ambassador for your team.</p>

4

At the Events

4.1	Overview.....	5
4.2	FIRST Safety	5
4.2.1	Safety Recommendations	5
4.2.2	Safety Recognition Program	5
4.2.3	Robot Carts	5
4.3	Courtesies and Rules	6
4.4	Staff/Volunteer Badges	6
4.5	Competition Overview	6
4.5.1	Practice Matches.....	6
4.5.1.1	The Filler Line	6
4.5.1.2	Courtesy	6
4.5.2	Competition Matches	7
4.5.2.1	Qualification Match Schedules	7
4.5.2.2	Scouting	7
4.5.2.3	Early Matches.....	7



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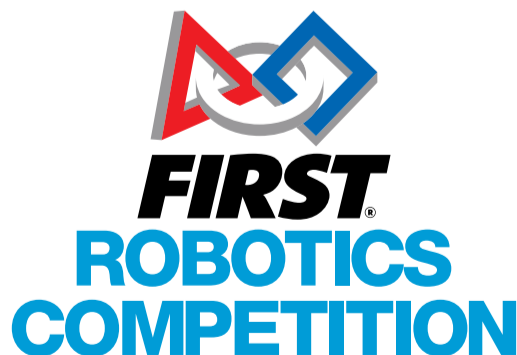
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4

At the Events

4.5.3	Competition Agendas.....	7
4.6	LOAD IN PROCEDURES	7
4.6.1	Bag and Tag	8
4.7	EVENT CHECK IN	9
4.7.1	Consent and Release Forms	9
4.7.2	Event Check-in Envelope.....	9
4.7.3	Pit Admin Station.....	9
4.7.4	Team Pits.....	10
4.7.4.1	Pit Rules	10
4.7.4.2	Pit Structure	10
4.7.4.3	Space Regulations	10
4.7.5	Spare Parts Station	10
4.7.6	Inspection.....	11
4.7.7	Machine Shop	11
4.7.8	Team-Provided Mobile Machine Shops.....	12



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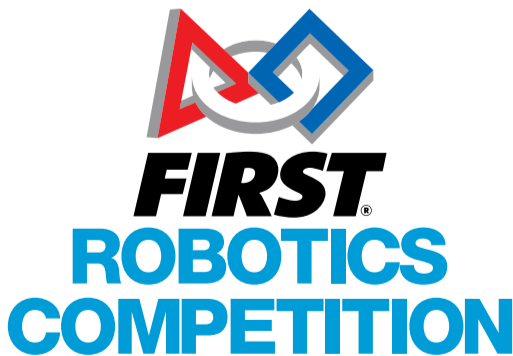
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4

At the Events

4.7.8.1 Team-Provided Machine Shop Requirements.....	12
4.7.8.2 Local Restrictions.....	12
4.7.8.3 Other Requirements	12
4.7.9 Machine Tools at Events.....	12
4.7.10 Suggested Equipment for Teams to bring to the events	13
4.7.11 First Aid Station	13
4.7.12 Traffic Flow	13
4.7.13 Announcements	13
4.7.14 Queuing Your Team	14
4.7.15 Property Security	14
4.7.16 Lost and Found	14
4.8 Ceremonies	14
4.8.1 Pit Manners/Rules during the Ceremonies.....	14
4.9 Pit Closing Etiquette	15
4.10 Team Socials	15



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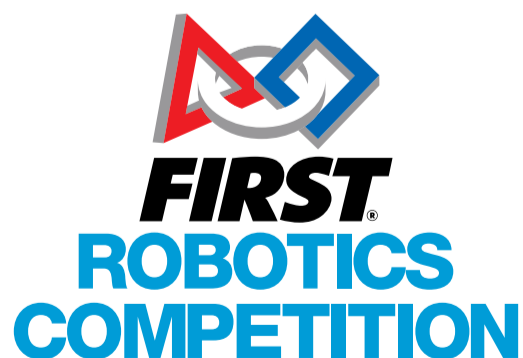
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4

At the Events

4.11 Team Spirit and Team “Look”	15
4.11.1 Team Giveaways.....	15
4.11.2 Mascots and Team Costumes.....	15
4.11.3 Competition Spirit.....	15
4.11.4 Banners and Flags.....	16
4.12 Bleacher Rules	16
4.13 Site Restrictions.....	16
4.14 Incident Reporting	17
4.14.1 Medical Incident Reporting	17
4.14.2 Non-Medical Incident Reporting	17
4.15 Considerations.....	17



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4 AT THE EVENTS

4.1 Overview

This section provides a general summary regarding safety, mascots/uniforms, recommended items and equipment for teams to bring to competition events. You will also find information about Pit rules, generic event schedules, robot inspections, replacement parts, and competition manners. The following section provides a “feel” for competition schedules, event check-in procedures, practice times, and matches. Please familiarize your team with this overview so all team members know what to expect at the events.

4.2 *FIRST* Safety

Participants and team mentors must review the *FIRST* safety policies and the *FIRST* Safety Manual located [here](#). These resources provide sound safety practices for your team’s work space and *FIRST* events.

Every team should know, understand and follow the safety rules found in the *FIRST* Safety Manual.

4.2.1 Safety Recommendations

At events, the pure anticipation and excitement can sometimes overshadow common sense and safety fundamentals. One safety area teams sometimes overlook is the need to wear appropriate clothing when working on or being around robots. In addition to the ANSI-approved, UL-listed, or CSA rated safety glasses required for eye protection, *FIRST* highly recommends that team members and mentors:

- Refrain from wearing dangling jewelry or loose, baggy clothing near the robots;
- Tie back long hair so that it will not get caught in the robot or other machinery; and
- Wear gloves to protect hands and fingers when handling the robot or the robot crate; finger injuries are one of the most common injuries at events!

See the [FIRST Safety Manual](#) for more information.

4.2.2 Safety Recognition Program

Throughout the competition, the easily recognizable, green-shirted Safety Advisors will continuously tour in pairs to observe activities in the Pit, practice field, queue line, and playing fields to observe the safety habits of the teams. This includes observing the un-crating/un-bagging of robots and transporting them between the Pit and playing fields. The Safety Advisors will rate safe performance in three key areas:

- Safe Behavior;
- Physical Conditions; and
- The use of Safety Glasses as well as other Personal Protective Equipment (PPE) as appropriate.

See the [FIRST Safety Manual](#) for more information on the Safety Recognition Program.

4.2.3 Robot Carts

To protect team members from muscle strains and other injuries as they transport the robot between the Pits and the competition area, we strongly recommend team members use a cart. Please keep the following in mind:

- Carts must remain in the team Pit area when not in use for robot transportation;

- All carts should fit through a standard 30-inch door;
- Wheels on the cart must not damage site flooring;
- Do not add music or other sound-generating devices to the cart, with the exception of devices of reasonable volume intended to be activated occasionally to make others in the direct vicinity aware that a robot is on the move for safety purposes; and
- Put your team number on your cart so it can be identified by field personnel.

NOTE: Carts must be safe. They must be easy to control and maneuver, and pose no risk to bystanders. Carts identified as unsafe by Safety Advisors must be made safe before they will be allowed to be used.

Refer to the [FIRST Safety Manual](#) for robot lifting techniques. By practicing these safety techniques, your team members will also develop a quick, fluid routine.

4.3 Courtesies and Rules

Please help to make guests feel comfortable and welcome! Provide your team with the event specific site restrictions and rules which could be found [here](#) so everyone can work and compete in a safe, sportsmanlike and friendly environment.

4.4 Staff/Volunteer Badges

At events, *FIRST* staff, event staff and volunteers will wear badges clearly marked with their title. Should your team members or mentors have questions or a problem, staff and volunteers will help you find the answer.

4.5 Competition Overview

This section provides general competition information and necessary details regarding scheduling, robot inspection, practice times, safety, rules, regulations, and suggestions for teams.

4.5.1 Practice Matches

Practice matches are played on the first day of each event. See *Game Manual* [Section 5 \(5.2 Practice MATCHES\)](#), for more details.

4.5.1.1 THE FILLER LINE

Although teams may not switch assigned practice times, there will be a designated filler line at each competition. Teams whose robots are ready for practice may join the filler line, IF THEY HAVE PASSED FULL INSPECTION. Teams from the filler line will be used on a first come, first served basis to fill empty spots in practice matches left by other teams that do not show up for their own practice match. See the *Game Manual* [Section 5 \(5.2.2 Filler Line\)](#) for more details.

4.5.1.2 COURTESY

In order to make the most of practice time, there will be specified teams on the field during an assigned practice slot. Each team must be respectful of the other teams sharing the field. Friendly

interaction between machines is acceptable, if all teams are willing. Unsportsmanlike conduct on the part of a team during practice could result in loss of practice time or other unfavorable action.

4.5.2 Competition Matches

Once your team robot passes inspection and receives its official sticker, you are eligible to compete.

4.5.2.1 QUALIFICATION MATCH SCHEDULES

Before the Pit opens on the morning when qualification matches begin, Pit Admin volunteers will place a copy of the qualification schedule on each team's Pit table. This list provides information as to when teams will participate, with whom and against whom. The list is final and the schedule will not be altered. See the Game Manual [Section 5 \(5.1.1 MATCH Schedules\)](#) for more details.

4.5.2.2 SCOUTING

Teams often use the Qualification Schedule to scout other teams to watch their strategies and robot capabilities. This is especially helpful when choosing alliances, should your team advance to the playoff matches.

4.5.2.3 EARLY MATCHES

Make sure your team is on time and in place if you have an early match on competition days. If your team is scheduled for any of the first four matches on those days, you must queue before the opening ceremony. Matches begin immediately after the conclusion of the opening ceremony.

4.5.3 Competition Agendas

Print the event-specific agenda from the web site for each event you will attend. This information can be found [here](#).

Bring it with you so your team will have the event's agenda.

4.6 LOAD IN PROCEDURES

Please check your event's public agenda for robot drop-off/pit set-up times.

NEW THIS YEAR: Some Regional events will be allowing teams to set up their pits as well as drop off their robots during the load-in period before pits officially open. Check the competition agenda for the event you are attending to see if pit set-up will be allowed.

If pit set-up will be allowed:

- Safety is the top priority.
 - » Safety glasses
 - » Closed heeled and closed toed shoes.
 - » Appropriate clothing
 - » Appropriate hair ties
- Teams will be allowed to set up their pits during periods when, in prior years, they would have only been able to load in their equipment.
 - » This includes both the afternoon/evening of the day before the event and the period in the morning before pits officially open to all participants.

- No more than five members of each team (one must be an adult mentor) will be allowed in the pit to load in and set up pits.
- No work of any kind on the bagged robot is allowed during these early set-up periods, even if an inspector has checked the bag and lock-up form for compliance. The robot must stay in the bag and sealed.
 - » All teams still must wait until the pits officially and fully open, as indicated on the event schedule, and even then can only open the bag if an inspector has checked for compliance
- Teams that have completed their set-up during either of the two periods must leave the pits to help minimize pit congestion.
- Teams will not be allowed to continue pit set up after the scheduled time of pit closing. Teams must plan to have their pits in a safe state at that time, even if some items are left undone
 - » Teams setting up their pits the afternoon or evening before will still be allowed in the following morning to complete set-up, if necessary.

If pit set-up will not be allowed:

- Safety is still the top priority. As such, normal pit rules will be in place. All team members must be wearing
 - » Safety glasses
 - » Closed heeled and closed toed shoes.
 - » Appropriate clothing
 - » Appropriate hair ties
- Teams are to bring their equipment in safely, drop it off in their pit area, and leave the pit
 - » The only other action teams are allowed is to plug in their battery chargers and start charging their batteries.
- No more than five members of each team (one must be an adult mentor) will be allowed in the pit to load in their equipment
- No work of any kind on the bagged robot is allowed. The robot must stay bagged.
 - » All teams still must wait until the pits officially and fully open, as indicated on the event schedule, and even then can only open the bag if an inspector has checked for compliance

4.6.1 Bag and Tag

On 'Stop Build Day' - (Tuesday, February 23rd), all teams must stop work on the robot by midnight local time and seal it in a large bag (using a tag) that will be included in the 2016 Kickoff Kit. Teams must also record when the robot was sealed on a Robot Lock-Up Form. Teams then transport the robot to and from their events on their own. Please check your event's public agenda for robot drop-off times. The robot may not be un-bagged and no work on the robot is allowed until the Robot Lock-Up Form from has been reviewed and signed by an inspector at your team's event.

See [Section 5 \(5.2 Bag and Tag and Robot Transport to Regional/District Events\)](#) for more information on Bag and Tag details.

4.7 EVENT CHECK IN

Event check-in takes place at the Pit Admin station the evening before and the first morning of each event. An adult team member must check in no later than noon on the first competition day of the event.

4.7.1 Consent and Release Forms

We strongly encourage all team members and mentors submit their Consent and Release forms electronically. Mentors registered in TIMS may complete the electronic Consent and Release form in [TIMS](#), and student team members/parents may complete their Consent and Release forms electronically via the [FIRST Youth Team Member Registration](#) (STIMS).

TIP! Having your team members and mentors submit their Consent and Release forms electronically will make things much easier for you—no excess paperwork to collect and keep track of!

Please note: If a team member decides to submit their Consent and Release form electronically, it will cover the team member's attendance for the entire season – from Kickoff through Championship. However, if a team member chooses to turn in a "hard copy" of the form (e.g. printed out from the website and signed) he/she will have to provide it at each FIRST event they attend. Details on the Consent and Release form process are available [here](#).

4.7.2 Event Check-in Envelope

Upon receipt of your team's consent and release forms, each team will receive an envelope containing the following:

- Operator Badges;
- History Patch for Team Standard;
- Pit Map;
- Practice Match Schedule;
- Safety Captain Badge; and
- Team List

4.7.3 Pit Admin Station

The Pit Admin station is centrally located in the Pit area. *FIRST* staff members and/or volunteers run this area to check teams in and help teams and visitors. Come to the Pit Admin station to:

- Turn in your team's roster and any hard copy Consent and Release forms;
- Check in and receive your check in envelope and badges. Please review your event agenda for Pit opening/closing time for each event;
- Get answers to most questions, including machine shop access;
- Ask about lost and found articles; and
- Report an illness, injury, or other incident.

4.7.4 Team Pits

Team Pit areas are the designated spaces where teams work on their robots. Each team is assigned a Pit space, which is marked with a sign containing the team number. This helps team members, judges and visitors find teams easily. Each team's Pit will have a table and power outlet.

Teams, volunteers, *FIRST* staff and guests spend a lot of time in the Pit area. Get to know other teams, help each other when you can, and keep the aisles clear. Time is short and help is very often right "next door" in the adjacent team pits.

Please note: Children under 12 MUST be accompanied in the Pit by an Adult at all times!

4.7.4.1 PIT RULES

For safety and because of insurance regulations:

- Teams cannot build any structure that supports people or items for storage above the work area in their Pit;
- No team station structures, signs, flags, or displays can be higher than 10 feet above the floor;
- Team signs, flags, and displays must be securely mounted to the Pit structure.

4.7.4.2 PIT STRUCTURE

FIRST personnel, event management and/or local committee members will require teams to remove any Pit structure that is deemed unsafe or outside specifications.

4.7.4.3 SPACE REGULATIONS

Each team is allotted approximately the same amount of workspace at an event, usually about 10'x10'x10'. However, Pit size can vary from event to event and in many cases, the space can be smaller. In all cases, the height of a team's Pit cannot exceed 10' (this includes the height of signs, flags, banners, etc.).

Keep your equipment and team members within your assigned area and do not "grow" into the aisle or any other spaces in the venue. If your team is too large to fit into the allotted Pit space, encourage your team to leave the area to scout other teams and/or to watch the matches. We ask that you please do not add to your space by setting up in another area.

4.7.5 Spare Parts Station

Spare parts will be available at the events; however, item availability varies from event to event. *FIRST* asks that teams bring any unused parts from their Kits to events to assist and support each other or donate them to the spare parts case (which will be used at other events). This kindness can expand your *FIRST* network of friends as you exchange parts.

Teams are responsible for all items required at events. If a team needs a replacement high-value item, LOANERS will be on hand based on availability and under certain restrictions that will be published after Kickoff.

4.7.6 Inspection

To ensure all robots are safely constructed and fall within the *FIRST* rules, there is an official Robot Inspection Station at each event. Certified Inspectors will be on site. Inspectors can sometimes help find problems and/or provide suggestions during an early inspection. Read below for criteria and caveats:

- To ensure safety and readiness, pre-inspect your robot before you bag it. This will help make your official inspection go smoothly and quickly;
- Inspectors will use an official inspection sheet for checking robots; a draft copy of the inspection checklist will be available to teams during the build season. Inspectors check off items on an inspection sheet as the team meets each piece of inspection criteria;
- Don't wait until the last moment to begin the inspection process! Bring your robot to the Robot Inspection Station early. Partial inspections, such as height and weight compliance, help prevent an inspection clog at the end of the day;
- Student team members must accompany the robot and be prepared to answer Inspectors' questions;
- Correct items and return for inspection, or ask for an inspection to be completed in your pit, until your robot passes;
- Robots must pass inspection before actually competing in qualification matches;
- Inspectors may re-inspect randomly before or after matches to ensure continued safety and compliance.
- See the Game Manual [Section 5 \(5.5.2 Eligibility and Inspection\)](#) for more details.

4.7.7 Machine Shop

Some events have a machine shop to help teams with repair and fabrication either sponsored by NASA or local organizations. While the machine shops vary, *FIRST* strives to have welding and a variety of high-powered tools available at the shop.

The staff and volunteers in the Pit Admin station will be able to tell you how to make use of the machine shop.

In most cases, the machine shop is on site and readily accessible to all teams. If a team attends an event where the Machine Shop is off-site, volunteers should be in place to help transport the robot to and from the machine shop. Team members are not allowed to travel with the robot. The team will fill out a Machine Shop Request Form that travels with the robot, so the machine shop staff and volunteers can follow their directions. The event should set up a method of communication between the venue and off-site Machine Shop in case there are any questions.

Teams can travel to the off-site Machine Shop on their own, either by walking or using their own vehicle. Remember that teams cannot be driven by the Machine Shop Shuttle Driver. All student team members must be accompanied by an adult at all times. We recommend bringing a second adult mentor, or a minimum of two students per group per the *FIRST* Youth Protection Program guidelines. The Youth Protection Program guidelines can be found [here](#).

Pit/Machine Shop Hours:	Specific hours are necessary to provide teams with equal work time. Please be aware of the opening and closing hours of the Pit/Machine Shop posted on the event-specific agenda.
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4.7.8 Team-Provided Mobile Machine Shops

FIRST welcomes team-provided mobile machine shop facilities/trailers at events, but the proposed facility must comply with *FIRST* and venue requirements. The mobile machine shop/trailer sponsor must adhere to the following requirements:

4.7.8.1 TEAM-PROVIDED MACHINE SHOP REQUIREMENTS

- The mobile machine shop must be run by properly trained individuals who are 18 years or older. Student team members are not allowed to run shop equipment.
- Neither *FIRST* nor the venue is liable for any loss or damage to team-owned equipment that should occur at the event.
- Provide security measures for the equipment (for example: bring a lock for a trailer). Neither *FIRST* nor the venue will provide these services for you.

4.7.8.2 LOCAL RESTRICTIONS

If a team-provided mobile machine shop is used, please note there are local restrictions such as fire codes and venue approval that you must consider as part of the process. *FIRST* will do its best to convey any relevant needs and work on your behalf to gain venue approval through a professional, legal process.

4.7.8.3 OTHER REQUIREMENTS

In addition to the above, the sponsoring team(s) must:

- Include an electrical source for the mobile machine shop facility;
- Ensure all teams have the ability to use the mobile machine shop and its tools/machines. (i.e. access cannot be restricted to certain teams);
- Handle job requests through the same counter/process as the *FIRST* provided shop services. We recommend using a standard Machine Shop Request Form. The sponsoring team's requests must be handled in the same manner as all other teams requests; and
- Operate ONLY during the event hours when the Pit is open.

4.7.9 Machine Tools at Events

When using tools in the Pit, be sure to use them properly, in a safe and controlled manner. Unsafe operation, especially those that endanger others and your team, will be subject to scrutiny by the event staff and safety reviewers. Their findings may result in team warnings or event expulsion.

Please adhere to the following safety rules regarding Pit safety and tool use:

- **Tools that throw sparks are prohibited.**

Examples: Electric welders, bench grinders and angle grinders.

- **Tools that produce open flames are prohibited.**

Examples: Gas welders and propane/MAPP gas torches.

- **Floor standing power tools are prohibited.**

Examples: Full-size drill presses, full-size band saws and full-size table saws.

- **Grinding or painting in the Pit is prohibited.** Designated grinding and painting areas are available to teams.
- **Brazing/welding is prohibited at the team Pits.** Use the machine shop.
- **Soldering is permitted.** Use electric iron/gun only.
- **Small, bench-top machinery, with appropriate guards, is permitted in team Pits.**
 - » We consider 'small' machinery as machinery easily lifted by one person. Examples: Small band saws, drill presses, and sanders.
- **Small, desktop machining centers are permitted as long as they are reasonably sized.** They must be appropriately covered to prevent throwing of chips during operation.
 - » We consider 'small' machining centers to be easily lifted by one person. Example: Desktop CNC mill.

4.7.10 Suggested Equipment for Teams to bring to the events

We suggest you bring the following:

- Extension cord - heavy duty and at least 25 feet long;
- Power strip - to make best use of your power drop;
- Other items as suggested on the Team Checklist in this section of this manual; and
- A relatively small cart to transport your robot from the Pit to the playing field. See [Section 4.2.3 Robot Carts](#) for cart requirements.

4.7.11 First Aid Station

There will be a first aid station in the Pit to assist in the event of injury and illness. Team Mentors and the Safety Captains should refer to the Pit map for the location and alert team members. **Notify the Pit Admin Station of any injuries or illness.** Bring a travel size first-aid kit for minor injuries.

4.7.12 Traffic Flow

At each event, there is a predetermined traffic flow pattern to maximize efficiency of the team/robot entrance and exit to maintain safety to the competition area. Refer to the Pit map for the flow. Queuing volunteers maintain this pattern at each competition event. Please obey the traffic rules to ensure an efficient lineup for practice and competition.

It is extremely important to keep aisles clear for safety, judging accessibility, robot mobility, maintaining competition schedules and courtesy. Please keep chairs and equipment out of the aisles. Please sit in the audience, not on the floor or in the aisles. **Judges and Safety Advisors will notice non-compliance.**

4.7.13 Announcements

We make every effort to keep noise down and announce only important items and scheduling, so PLEASE do not ask the Pit Announcer to make frivolous announcements.

4.7.14 Queuing Your Team

The Pit Announcer and Queue Volunteers must maintain the practice and match schedules. Your team should designate team members to be your Queue Captains and carefully watch the schedule and alert the team when its turn is near. The Queue Captain should:

- Look at the Pit map to find the pre-set traffic pattern for each event.
- Listen carefully for the queuing announcements and line up your four competing team members/mentor and robot when your team number is announced.
- Queue your team one-half hour prior to your matches at the Championship since there are no match announcements. Ensure you monitor play within your respective division and adjust your queuing time accordingly. Please check with the Lead Field Queuing personnel on your field if you have questions.

NOTE: Check the schedule. If your team is in the first four matches of any day of competition, your team's robot and competition team must queue prior to the Opening Ceremony, on or near the field.

4.7.15 Property Security

There have been occasions when items such as cameras and laptops have “disappeared” from the Pit or competition area. Use common sense and do not leave valuable items unattended. Neither the site nor *FIRST* is responsible for any theft. Take valuable items with you, or designate a team representative to remain with them in the team Pit or competition areas.

4.7.16 Lost and Found

If you find an article or lose one, come to the Pit Admin station to fill out a “Lost Item Report” or turn in an article you find. We will make every reasonable attempt to return articles to owners.

4.8 Ceremonies

At every event, there are Opening and Closing Ceremonies. These ceremonies allow everyone to show honor and respect for their countries, sponsors, teams, mentors, volunteers and award winners and they provide everyone with the opportunity to applaud the successes of team members and mentors. They also give teams a chance to “meet” the judges, referees, MCs and other important persons and sponsors involved with the event.

At the Awards Ceremony, *FIRST* presents trophies and medallions to outstanding teams. We encourage all team members to attend the ceremonies, on time, to show appreciation for the event and those people involved who are volunteering their time and efforts.

Should a few team members need to remain in their pit to continue work on their robot during the Opening or Closing Ceremonies, they are allowed to. However, the team must follow the rules below.

4.8.1 Pit Manners/Rules during the Ceremonies

- Team members will not be allowed to use power tools, hammers or other noisy tools during the ceremonies;

■ All persons in the Pit should observe the code of behavior for the presentation of all national anthems:

- » Maintain a respectful silence;
- » Stand, facing the flag. If there is no flag, look toward the video screen showing a flag; and
- » ALL hats off please.

4.9 Pit Closing Etiquette

For many reasons, it is necessary that teams adhere to the Pit closing time each day. Many people working in the Pit are volunteers and deserve to have a set closing time. Help get ready for pit closing in advance by assigning team members and mentors to the role of Pit clean up and organization.

4.10 Team Socials

Team socials may be held after the awards ceremony on the evening of the second day of the event. Team socials may include food, fun and an opportunity to unwind and get to know each other in an informal, relaxed and entertaining setting. Team socials are not sponsored by *FIRST*.

4.11 Team Spirit and Team “Look”

When deciding on a team name or acronym, consider how you can work a theme around it to make your team more fun and recognizable. Part of the pleasure of being a team member or mentor is the way the team stylizes itself.

Team numbers provide unique identification for *FIRST* Robotics Competition teams. We strongly recommend that you include the team number on all team T-shirts, trading buttons, hats, cheers and costumes.

4.11.1 Team Giveaways

Teams often bring small items to give away to others at the event. This is completely optional, but is certainly a great way to promote your team’s identity. The most popular item to give away is a button with your team logo and number.

4.11.2 Mascots and Team Costumes

Keep safety in mind. Awards acceptance often means descending and ascending stairs/bleachers. Please make sure that mascot and team costumes are safe and comfortable for the wearer to prevent fainting and dehydration.

4.11.3 Competition Spirit

We ask that you bring attention to your team in ways that are in good taste and in the spirit of the competition. Please refrain from the following:

- Using noisemakers;
- Using objects that can damage bleachers or floors;
- Wearing inappropriate clothing; and/or

Please make sure your Pit space and surrounding areas are clean when you leave the site each day.

4.11.4 Banners and Flags

We encourage teams to bring team flags and/or banners for display in their pits and/or the playing field area, under these rules:

- Do not cover or move other team banners or sponsor banners that are already in place
- Share the available space fairly with other teams
- Hang banners only where they will not obstruct the view of spectators
- Hang banners in a safe manner
- At the end of the event, safely remove all banners and anything used to hang the banners (tape, string, etc.)
- Do not use banners to block off or save seats (see [Section 4.12 Bleacher Rules](#) below)
- Respect venue-specific rules regarding banner location and hanging method

4.12 Bleacher Rules

Sitting together in a group during competition matches makes the game more exciting and fun. It's where you can show support for your team. Since very often there is not enough seating to accommodate everyone, there has to be a policy regarding seating. Teams are not permitted to save seats for team members that are not present. In addition, it is not permitted to hang banners or ribbons to designate seating. Event staff will remove and discard any banners, roping, etc., used to designate seating. Please take turns sitting in the bleachers if seating is limited. If there is a crowding problem, we ask that you kindly leave after your team's match and return later if possible.

4.13 Site Restrictions

Read the following site restrictions and adhere to them in order to promote an orderly, safe, pleasant and exciting competition.

- Do not use skateboards or 'hoverboards'. This is a safety concern.
- Do not use drones. This is a safety concern.
- Do not bring bottled gas tanks (e.g. helium). This is a safety concern.
- Do not use noisy devices, such as floor stompers, whistles and/or air horns.
- Do not arrange for Internet access or phone lines from venue service providers or attempt to use venue internet connections reserved for event purposes (e.g., FMS or streaming).
- Do not sell any products. This includes food, hats, shirts or any promotional products.
- Do not distribute any food products, such as candy, water, soft drinks or fruit.
- Do not sell raffle tickets.
- Do not use walkie-talkies.
- Do not invite or bring live bands to play in the audience. This dilutes the presentation on the playing field and is too loud and confusing for the audience.
- Do not play loud music in the Pit because it interferes with important announcements. If a team receives more than a warning or two, the power to the team Pit will be shut off and/or the music device confiscated.

- Do not form “tunnels” during the Awards Ceremony. This can cause discomfort to those traveling through them and creates safety issues.
- Do not save seats.

4.14 Incident Reporting

4.14.1 Medical Incident Reporting

FIRST strives to create an environment in which team members can grow, learn, and have fun with minimal risk of injury. *FIRST* requires that physical injuries and medical problems, however slight, be documented and reported to the party conducting the event or his or her designee and to *FIRST* Headquarters within 48 hours of the occurrence. Should an incident or illness occur at an event, we ask that you do the following:

- Report it to the EMT or nurse
- Have an adult mentor complete a Medical Incident report with the Pit Administration area

4.14.2 Non-Medical Incident Reporting

FIRST maintains a culture where concerns about the safety and comfort of team members can be raised and addressed. If anyone states that they feel threatened or uncomfortable because of verbal abuse, inappropriate contact, or other negative behaviors that are not in the spirit of *FIRST*, we ask that you complete a Non-Medical Incident Report to formally document the event. *FIRST* takes all disclosures and indications of risk seriously, while honoring every individual’s right to privacy. Non-Medical Incident Forms are kept at the Pit Admin area and may be completed anonymously.

4.15 Considerations

You will often hear the expression *Gracious Professionalism*[®] throughout your involvement in *FIRST*. You can read Woodie Flowers’ definition in [Section 1 \(1.3 Gracious Professionalism®, a FIRST Credo\)](#). One of our main goals is to encourage all team members and mentors to conduct themselves with kindness, sharing and consideration of others.

Gracious Professionalism is a central tenet of the *FIRST* experience. It is not acceptable to engage in hostile action, hostile/profane language or any other violent or antagonistic conduct. *FIRST* reserves the right, at its discretion, through the Event Manager or his/her designee, to arrange for any team, team member, event participant or other individual to be removed from participating or attending any *FIRST* event or program for engaging in such conduct. *FIRST* looks forward to everyone’s cooperation in keeping our programs and events exciting, educational and full of *Gracious Professionalism*.

SAFETY GLASSES are REQUIRED!
Bring enough for your team and visitors.

**Bring required completed CONSENT/ RELEASE FORMS
and TEAM ROSTERS for all student team members and
mentors!**

TOOL BOX ITEMS

- Ball driver set / nut driver set
- Batteries and Charger
- Box cutter
- Broom (small, for team Pit cleanup)
- Cable ties / connectors / rubber bands
- C-Clamp, large, medium, small
- Cutters
- Deburring tool
- Dremel tool/accessories
- Drill - cordless w/charger
- Drill bit set
- Flashlight
- Glue, super and/or glue stick
- Hacksaw and blades
- Hammer (ball peen & brass)
- Heat gun
- Leatherman-type tool
- Level, small
- Lithium grease, spray can
- Magnet on a stick
- Paint brush
- Pliers - large, small, needle nose assort.
- Power outlet strip/extension cord (2)
- Power screwdriver
- Saber saw/wood & metal blades
- Sandpaper - various grits
- Screws - nuts - washers
- Screw driver assortment, flat and Phillips
- Shrink tubing
- Socket set – 1/4", 3/8" drive
- Soldering iron (electric), solder, wick, flux
- Spare parts
- Square - small, medium
- Tap & die set/assorted taps
- Tape
- Clear
- Electrical
- masking
- Tape measure / ruler
- Tin snips
- Tweezers / scissors
- USB stick/drive
- Vice grip - large, small
- Volt meter
- WD-40 / lithium grease, spray can
- Wire terminal crimpers / Wire strippers
- Work gloves- several pairs
- Wrenches, Allen, crescent, open and box
- X-Acto type knife and blades

ADDITIONAL ITEMS

- Banners - Corporate signs & flags for team Pit
- Camera and film, disposable
- Cart for moving robot
- Drop light
- Epoxy
- File folder box for paperwork
- Hand truck
- Laptop / software / cables / discs
- Manual and updates
- Medical Release Forms
- Message board - dry erase marker set
- Notepads / spiral notebook / clipboard
- Paper / Sticky Notes
- Paper towels and paper cups
- Pens / pencils / sharpies / markers
- Portable printer
- Release form for each person, completed
- Seat(s) for team Pit (small, foldable)
- Schedule to set up and break down team Pit
- Spray cleaner
- Stapler / staples
- Storage box / bins- trinkets & trash (buttons)
- Team roster and contact information
- Trash can (small) / trash bags
- Plastic zip type bags

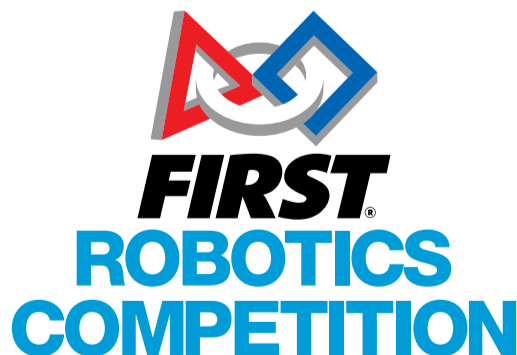
PERSONAL ITEMS

- Alcohol Prep Pads / First Aid Tape
- Anti-Nausea or Diarrhea Medication
- Cough Drops / Sore Throat Medicine
- Eye Wash And Drops
- Facial Tissues/ Cotton Balls / Wet Cloths/
- Feminine Products
- First Aid Kit - Band-Aids / Blister Kit / Ice Pack
- Hand Sanitizer / Liquid Soap
- Insect Sting Medicine / Insect Repellent
- OTC Pain Medication; i.e., Aspirin, etc...
- Safety Glasses
- Sewing Kit (Small)
- Sunscreen / Sunburn Spray / Aloe Vera Gel

5

Robot Packaging and Transportation

5.1	Stop Build Day	3
5.2	Bag and Tag and Robot Transport to Regional/District Events	3
5.3	Instructions for “Bag and Tag”	3
5.3.1	The Proper Bagging Procedure:	3
5.4	Robot Lock and Unlock Instructions	4
5.4.1	Completing the Robot Lock-up Form	4
5.4.2	When the Robot Lock-up Form is Required to be Available.....	4
5.4.3	Robot Displays	5
5.5	“Robot Access Period” – For Teams Attending District Events	5
5.5.1	‘Robot Access Period’ - Permitted Actions.....	5
5.5.2	‘Robot Access Period’ - Schedule	6
5.6	Requesting a Robot Transport Exemption	6
5.6.1	Additional Exemption Requirements, Restrictions and Information:	6
5.6.2	How to Request a Robot Transport Exemption:.....	6
5.6.3	Denied Robot Transport Exemption Requests:.....	7



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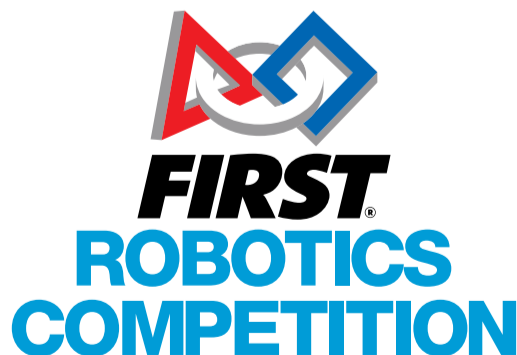
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5

Robot Packaging and Transportation

5.6.4	Approved Robot Transport Exemption Requests:.....	7
5.7	Crate Shipping Instructions for Robot Transport Exemption Approved Teams and Those Attending <i>FIRST</i> Championship	8
5.7.1	Important Information:	8
5.7.2	Tool Crate Information	9
5.7.3	Shipping Instructions for Robot Transport Exemption Granted Teams	9
5.7.4	Shipping your Robot to the <i>FIRST</i> Championship	10
5.7.5	Shipping your Robot using your own Funds.....	11
5.8	Important Shipping Contacts	12
5.8.1	<i>FIRST</i> is Your Primary Contact.....	12
5.8.2	FedEx	12



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5 ROBOT PACKAGING AND TRANSPORTATION

The following guidelines will ensure that your robot is packaged and documented correctly and arrives where it needs to be on time so that your team can focus on the most important thing – participating in the event!

5.1 Stop Build Day

All teams must cease work on their robot on or before Stop Build Day. Any team that fails to comply may jeopardize their participation in the rest of the *FIRST* Robotics Competition season. Note that “Stop Build Day” is a specific date. You may work on your robot until midnight local time on Stop Build Day.

STOP BUILD DAY IS TUESDAY, FEBRUARY 23, 2016

5.2 Bag and Tag and Robot Transport to Regional/District Events

All teams must “Bag and Tag” their robots. Teams are also required to transport their bagged and tagged robot to their competition event(s). For convenience, teams may disassemble their robots and use two bags to “Bag and Tag” them. However, no more than two bags may be used and each bag must have its own numbered tag and entry on the Robot Lock Up Form described below.

When transporting their robot, teams may use any transportation method they wish (at their own risk and expense), as long as the robot remains sealed in the bag.

You must bring your own bagged, tagged and sealed robot into the venue through the designated robot entrance. Teams will **NOT** have access to the loading docks or forklifts; we recommend bringing a rolling cart or dolly to facilitate the load in.

5.3 Instructions for “Bag and Tag”

Each team will receive a special “Bag and Tag” kit in January with their Kickoff Kit. The “Bag and Tag” kit will contain:

- Two plastic bags large enough to contain your robot; and
- At least ten tags with individual serial numbers.

5.3.1 The Proper Bagging Procedure:

- Set the bag on the floor, leaving room for the robot in the center.
- Place the robot in the center of the bag and pull the bag up around the robot. Be careful not to catch the bag on any corners or sharp edges.
- Tightly seal the bag with your next numbered tag.
- Complete the [Robot Lock-up Form](#) as required in [Section 5.4 Robot Lock and Unlock Instructions](#) to verify the date and time that the bag was sealed.

You may NOT open your bag until:

- It has been checked, approved by an on-site robot inspector, AND

- The pits have officially been opened for robot work. You must have your [Robot Lock-up Form](#) ready for review at the event. DO NOT forget to bring it.

After your [Robot Lock-up Form](#) has been properly checked and approved, your team may open the bag and prepare to compete.

After the event, if you are attending another event, such as the *FIRST* Championship or another Regional or District event, re-seal your robot in the bag with a new tag and enter the new tag number on the [Robot Lock-up Form](#). You may not access your robot again until the next event, unless you are attending a Two-day District event, as explained in [Section 5.5 “Robot Access Period” – For Teams Attending District Events](#).

Remove your robot from the event through the designated exit.

If you are attending the *FIRST* Championship as your next event, or have been granted an Exemption to ship your robot to an additional event, follow the instructions listed in [Section 5.6 Requesting a Robot Transport Exemption](#).

5.4 Robot Lock and Unlock Instructions

5.4.1 Completing the [Robot Lock-up Form](#)

The [Robot Lock-up Form](#) is available on the home page of the *FIRST* Robotics Competition Manual. Make sure that you complete every item on the form. **INCOMPLETE FORMS WILL BE REJECTED BY ROBOT INSPECTORS AT EVENTS.** The [Robot Lock-up Form](#) must be completed by an adult, 18 years old or older, who is NOT a student on the team.

By signing this form the signatory attests to the fact that he/she is:

- 18 years old or older;
- Not a student member of the team, and
- Making certain all rules and regulations regarding access periods and lock/unlock are being followed. Cell phone numbers are required for verification in case robot inspectors at events have questions regarding the form.

Remember to bring your [Robot Lock-up Form](#) to your event. A missing [Robot Lock-up Form](#) is one of the top reasons teams are delayed in being allowed to un-bag their robots on time at events.

5.4.2 When the [Robot Lock-up Form](#) is Required to be Available

The [Robot Lock-up Form](#) MUST be used:

- On “Stop Build Day”;
- During any ‘Robot Access Period’ taken advantage of if you are attending a two-day district event. See [Section 5.5 “Robot Access Period” – For Teams Attending District Events](#) for details. Please note, the ‘Robot Access Period’ only applies to teams attending two-day district events. Teams attending three-day regional events do not have a ‘Robot Access Period’; and/or
- Before you leave an event, if you expect you will/may be attending a later event.
- attending three-day regional events do not have a ‘Robot Access Period’; and/or
- Before you leave an event, if you expect you will/may be attending a later event.

The Robot Lock-up Form DOES NOT need to be used:

- Before “Stop Build Day”;

- During the event; and/or
- After an event, UNLESS you are competing at any later events, including the *FIRST* Championship.

5.4.3 Robot Displays

To assist teams with their promotional and community relations activities, robots may be unbagged and operated briefly after “Stop Build Day” for display purposes only.

- The intent of this option is to allow teams to briefly show their robot to their community, sponsors, or potential sponsors after “Stop Build Day”.
 - » Unbagging a robot and putting it on display for many hours (i.e., more than four (4)) at a time would not be considered a “brief” display.
- The [Robot Lock-up Form](#) must be used to track the unbagging and rebagging of the robot during this period. In the “Explanation” column of the form, enter “Robot Display”.
- No activity that could be considered “work on” or “practice with” the robot is allowed.
- Brief displays of robot functions – driving for example – are allowed, but not to the extent that they could be considered practice.
- A good way to avoid turning a robot display period in to a practice session is to have non-drive team members operate the robot, and only for as short a time as necessary to show the robot’s capabilities.
- If you have any questions about the Robot Display option, please email frcteams@firstinspires.org.

5.5 “Robot Access Period” – For Teams Attending District Events

Two-day district events for the 2016 season include:

- *FIRST* Chesapeake District (DC, MD, VA)
- *FIRST* in Michigan District (MI)
- Indiana *FIRST* District (IN)
- Mid-Atlantic Robotics District (DE, NJ, Eastern PA)
- New England *FIRST* District (CT, MA, ME, NH, RI, VT)
- North Carolina District (NC)
- Pacific Northwest District (AK, OR, WA)
- Peachtree District (GA)

Teams attending these events will not have as much time to work on their robots at events as teams attending traditional three-day regional events. Due to this, teams are granted an additional “Robot Access Period” to un-bag their robot between the “Stop Build Day” and their two-day district events.

Teams attending Traditional Regional Events are NOT granted a “Robot Access Period” after “Stop Build Day.” This section only applies to teams attending district events.

5.5.1 ‘Robot Access Period’ - Permitted Actions

During the Robot Access Period, teams may perform any activity they would normally do during the build season, including practicing with the robot.

5.5.2 'Robot Access Period' - Schedule

Teams may unlock their robot for a total of six (6) hours during the 7-day period preceding any two-day event in which their team will be competing with their robot. The six hours may be broken up in any way the team wishes, with the exception that no single access period may be shorter than two (2) hours. The robot must be locked up in between sessions and this must be documented on the [Robot Lock-up Form](#) each time.

5.6 Requesting a Robot Transport Exemption

Not all *FIRST* Robotics Competition teams have the ability to transport their robots to events. While it is our goal to assist as many teams as possible that have demonstrated hardships, due to the increasing number of *FIRST* Robotics Competition teams, we will be taking a much closer look at robot transport exemption requests. To be eligible for a robot transport exemption, a *FIRST* Robotics Competition team must provide detailed information to establish that a substantial hardship exists:

- The team is unable to physically transport the robot to the event itself
- Your team's home location is a great distance from the event you will attend and you do not have the means to transport your robot

And

- The team is unable to pay to transport the robot to the event itself
- Your team faces significant financial challenges that prevent you from paying to transport the robot to the event you will attend

5.6.1 Additional Exemption Requirements, Restrictions and Information:

1. Robot Transport Exemptions are for Regional Events only.
 - I. Robot Transport Exemptions to District Events (this includes In-District and Inter-District Events) will NOT be permitted.
2. Robot Transport Exemption requests for teams to attend consecutive weekly events will NOT be granted.
3. Robot Transport Exemption requests will be handled on a case-by-case basis. Not every request will be granted.
4. **Exemptions must be submitted by Friday, December 8, 2015.**
5. Your team may request a Robot Transport Exemption to the Regional in Australia, however your team will not be able to participate in Regional events on the following weeks: 1, 2, 4, or 5.
6. If you request a Robot Transport Exemption, but then do not have a need for it, you **MUST** notify *FIRST* HQ that you no longer require a Robot Transport Exemption. This can be done by emailing frclogistics@firstinspires.org.

5.6.2 How to Request a Robot Transport Exemption:

1. To request a Robot Transport Exemption, you must fill out the “Robot Transport Exemption” form, located [here](#).
2. **Exemption requests must be submitted by Friday, December 8, 2015**
3. *FIRST* HQ will review your request and respond with either “approved” or “denied”
 - II. Teams will be denied a Robot Transport Exemption if it does not appear that your team will experience a substantial hardship from transporting the robot to a regional event.
4. If your team has been approved, you will receive the electronic shipping documents and instructions on shipping your robot to the regional event a few weeks before your event.

5.6.3 Denied Robot Transport Exemption Requests:

1. After reviewing the robot transport exemption request, the determination was made that your team will not experience a substantial hardship from transporting the robot to a regional event.
2. *FIRST* will not set up robot storage/drayage for your robot and will not provide FedEx shipping documents.
3. Your team is solely responsible for ALL shipping and robot storage/drayage costs.
4. Your team is solely responsible for locating and coordinating with a local team or business to receive and return your robot crate before and after the regional event.
5. Your team is responsible for tracking the robot shipment to ensure it arrives on time for the regional event.
6. **DO NOT CONTACT THE VENUE.** Robot crates are not allowed to be shipped directly to the venue.

5.6.4 Approved Robot Transport Exemption Requests:

1. If an Exemption request is approved, *FIRST* HQ will establish a robot storage/drayage location near the event site.
2. **Only teams that have requested and been granted** a Robot Transport Exemption will be able to make use of the FedEx shipping donation.
3. **DO NOT SHIP ROBOTS DIRECTLY TO THE SITE!** All Robot Transport Exemptions must use the Drayage service that is provided by *FIRST*.
4. **IMPORTANT:** When granted a robot transport exemption, your team will receive a total of two (2) FedEx shipping documents to be used for the current *FIRST* Robotics Competition Season. This includes the *FIRST* Championship.
 - I. Your team may use the FedEx shipping document to:
 - a. Ship robot crate to a Regional Event; or
 - b. Ship robot crate home from a Regional Event; or
 - c. Ship robot crate to the *FIRST* Championship
 - II. **Please note:** If your team uses both FedEx shipping documents to ship the robot crate to and home from a regional event, your team has exhausted the FedEx shipping donation for the current *FIRST* Robotics Competition Season.

- a. **IMPORTANT:** Your team is responsible for coordinating the robot shipment and paying the shipping charges should you qualify or be invited to the *FIRST* Championship. *FIRST* will NOT provide your team with another FedEx shipping document.
5. **NOTE:** Robots with robot transport exemptions and ALL those attending the *FIRST* Championship must be bagged and tagged with the robot shipped in a shipping crate. Teams may not open the bag until an onsite robot inspector has approved your team to do so.

If you have been granted a Robot Transport Exemption, you can find shipping instructions under [Section 5.7.3 Shipping Instructions for Robot Transport Exemption Granted Teams](#).

5.7 Crate Shipping Instructions for Robot Transport Exemption Approved Teams and Those Attending *FIRST* Championship

5.7.1 Important Information:

1. All Robot Transport Exemption granted teams **MUST** build a crate to ship their robot in.
2. ALL teams attending the *FIRST* Championship **MUST** build a crate to ship their robot in and **MUST** ship their robot to the *FIRST* Championship.
 - I. Robot shipments in crates must abide by standard freight shipping processes. This applies to any team moving their robot within a crate.
 - II. FedEx will not pick up a robot that is not in a crate.
3. See the [Shipping Crate Construction](#) document for more details. As a reminder these minimum guidelines must be followed:
 - I. **Keep your FILLED crate weight below 400 pounds.** Teams are expected to use their crate to ship their robot and to minimize any additional components or tools included, in order to keep the crate weight below 400 pounds.
 - II. **DO NOT** include any tools, luggage or additional materials that will cause your crate to exceed the maximum weight. **Any teams exceeding 400 pounds will be charged overage fees accordingly.**
 - III. **Clearly mark your crate with your team number for identification purposes.**
 - IV. **Attention International teams:** The robot transportation exemption is only intended for transporting your robot. However, if you must include additional items in the crate, such as spare robot parts, tools or pit materials, you **MUST** declare ALL ITEMS on your Customs paperwork and include the following details: description, value, country or origin, Harmonized Tariff Schedule (HTS) number, etc. For more details, please go to the [FIRST Robotics Competition Robot Transportation page](#).
 - a. Anything you pack in the crate on Import **MUST** also be included upon Export. The entire shipment is a Temporary Import; work with your Customs broker to ensure proper filing.
 - b. *FIRST* is not responsible for any items that are not declared or confiscated by Customs.

4. Affix sheets of clear plastic or a sturdy sheet protector securely to the outside of your crate for a place to put the shipping documents before shipment. Failure to do this may result in lost or delayed robots, due to missing or ripped shipping documents.
 - I. We recommend purchasing a Job Ticket Holder, model number S-2761, from ULINE. You can see this product [here](#).
5. FedEx Freight requires prior notice for pickups, especially if your location does not have a loading dock.
 - I. If you have been granted a Robot Transport Exemption and/or are attending the *FIRST* Championship, you must call FedEx after you have received your shipping documents to schedule your pickup **AND** indicate if there are any special instructions for pickup (i.e., lift gate needed or shipment is located at a school).
6. Please keep in mind that there could be a delay in FedEx's availability to pick up your robot, due to a proper truck being available. Therefore, do NOT wait until the last minute.
 - I. Please make sure you contact the appropriate division of FedEx based upon the instructions provided on your waybill; i.e., Air, International, Express or Freight.
 - II. For more information see the "Quoting and Booking a Robot Crate" document posted on the [FIRST Robotics Competition Robot Transportation page](#).
7. If you find that your robot crate has been damaged on the journey to your event, you must notify the Pit Admin at your event on the *FIRST* day of the event.

5.7.2 Tool Crate Information

Teams granted a Robot Transport Exemption or attending *FIRST* Championship MAY ship or bring a tool crate. Some teams choose to ship or bring a second crate to the event(s) to have additional tools available. Shipping a second crate is allowed, but only if the team meets the following requirements:

1. The team is solely responsible for ALL shipping and drayage costs for their second crate;
2. The second crate may NOT be shipped using the FedEx donation. Abuse of the FedEx donation may result in a loss of this option for teams in the future;
3. Paint or stencil "TOOL CRATE" in letters at least 6 inches tall on each side of the crate. Failure to properly label which crate contains tools may delay arrival of your robot at the event.

5.7.3 Shipping Instructions for Robot Transport Exemption Granted Teams

If you are approved for an exemption, *FIRST* HQ will provide you with two (2) FedEx vouchers for transportation to/from the official drayage location with specific instructions as to which type of FedEx service you are eligible for based upon geography.

1. Your robot will be shipped to a drayage location identified by *FIRST* depending upon the location where it will be stored and then transported in time for your event.
2. Once at the venue, you will un-crate the robot and return it to the crate at the conclusion of the event for re-shipment.
3. Once the robot is re-crated, attach the appropriate shipping documentation to the crate inside the plastic document cover, to facilitate shipping from the drayage facility to its next destination (Regional, home, or *FIRST* Championship).

4. After your robot has been picked up by FedEx, please provide *FIRST* HQ (frclogistics@firstinspires.org) with a copy of your shipping documentation. This will allow *FIRST* to assist with any logistical complications.
5. The drayage company will pick it up at the event, bring it back to the drayage location and ship the robot to its next destination using instructions you provide which are attached to your crate.
6. **International teams:**
 - I. Be sure you have also included the necessary Customs documents; i.e., Commercial Invoice, Shipper's Letter of Instruction and packing list, etc. so that your shipment is processed through Customs without delay
 - II. Due to import and export laws, *FIRST* has created a secondary document for international teams. For more information see the "International Shipment Guide" document posted on the [FIRST Robotics Competition Robot Transportation page](#).

If your first event is the one to which you have been granted a Robot Transport Exemption, you must still bag and tag your robot on "Stop Build Day". You may be able to delay shipping your robot until after "Stop Build Day", and robot inspectors will need evidence that the robot has not been worked on between "Stop Build Day" and shipment. Follow the Robot Lock and Unlock Instructions in [Section 5.4 Robot Lock and Unlock Instructions](#) to lock up your robot. DO NOT open your bag at the event until it has been checked, approved by a robot inspector, AND the pits have officially opened for robot work. Remember you will need to bag the robot again at the conclusion of the event if you are going to a later competition.

If the event for which you have been granted a Robot Transport Exemption is not your first event, you must bag and tag your robot at the conclusion of the earlier event, bring it back to your build site or other location away from the event venue, crate the robot and prepare for shipment. Follow the Robot Lock and Unlock Instructions in [Section 5.4 Robot Lock and Unlock Instructions](#) to lock up your robot at the earlier event. DO NOT open your bag at the next event until it has been checked, approved by a robot inspector AND the pits have officially opened for robot work. Remember, you will need to bag the robot again at the conclusion of the next event if you are going to a later competition.

5.7.3.1 LIMITATIONS OF THE FEDEX VOUCHER FOR ROBOT TRANSPORT EXEMPTION APPROVED TEAMS

1. **If you are attending multiple events and have requested a Robot Transport Exemption, you will still ONLY receive two (2) FedEx shipping documents. Attending multiple events does not increase the number of FedEx shipping documents a team will receive. The maximum number of FedEx shipping documents any team will receive during the season is two (2).**
2. **After you have used your two (2) FedEx shipping documents, you will be responsible for the robot shipping costs to/from any additional events in which your team is competing. This includes the *FIRST* Championship.**
3. Teams with Robot Transport Exemptions have the option of using their second FedEx shipping document to ship their robot to a second Regional, or to the *FIRST* Championship, or home. (ALL teams will receive a FedEx shipping document to ship their robot home from *FIRST* Championship at the *FIRST* Championship event during Check Out).

5.7.4 Shipping your Robot to the *FIRST* Championship

1. If your team qualifies for the *FIRST* Championship, you will be emailed one (1) FedEx electronic shipping document after the qualifying event to ship your robot to the *FIRST* Championship. **Note: Robot Transport Exemption Granted teams see [4.III.b](#) below.**
2. **Your team's Main and Alternate Contacts will receive an email advising them to complete a document with the shipping information to ship your robot to the *FIRST* Championship. They will then need to promptly reply back with this information. Failure to provide this information in a timely fashion could result in your robot not making it to the *FIRST* Championship in time.**
3. ALL teams attending the *FIRST* Championship **MUST** have a crate to ship their robot in and **MUST** ship their robot to the *FIRST* Championship.
4. Robots competing at the *FIRST* Championship must be shipped as soon as you have secured your spot, completed payment and received your shipping documents, and no later than the deadline provided to your team with your shipping documents.
 - I. *FIRST* will not be responsible for any robots not shipped by teams per instructions. Failure to ship robots in a timely fashion could result in robots arriving late to the *FIRST* Championship with the potential to miss matches.
 - II. Non-Exemption Granted Teams:
 - a. After you have competed at another event, you must ensure your robot is bagged and tagged at the conclusion of that event per the instructions in [Section 5.3 Instructions for "Bag and Tag"](#). Bring your robot back to your build site or other location away from the event venue, crate the robot and prepare for shipment to *FIRST* Championship. Follow the instructions as outlined in [Section 5.7 Crate Shipping Instructions for Robot Transport Exemption Approved Teams and Those Attending *FIRST* Championship](#) regarding crating requirements.
 - III. Robot Transport Exemption Granted Teams:
 - a. After you have competed at your final event, you must ensure your robot is bagged and tagged at the conclusion of that event per the instructions in [Section 5.3 Instructions for "Bag and Tag"](#). Your robot and robot crate will be transported back to the drayage location of your final event.
 - b. Have you used both of your FedEx shipping documents?
 - i. If yes, your team is responsible for coordinating transportation and paying shipping costs for the robot crate to the *FIRST* Championship. You **MUST** provide the carrier and tracking information in an email to frclogistics@firstinspires.org.
 - ii. If no, you may use your second FedEx shipping document to ship your robot directly to the *FIRST* Championship drayage location.
5. All teams attending the *FIRST* Championship will receive (1) one shipment home for their robot under the FedEx donation. The FedEx shipping document for this shipment will be distributed at *FIRST* Championship at Check Out.
 - I. This shipping document will be pre-printed with the shipping information that you provided before Championship.

6. If the team would like to take their robot home as they leave *FIRST* Championship, they **MUST** email frclogistics@firstinspires.org to have their request approved by April 22, 2016.

5.7.5 Shipping your Robot using your own Funds

Teams may ship their robot to any event at their own cost without receiving an approved Robot Transport Exemption from *FIRST*. DO NOT ship directly to the venue. However, unless a team has received a robot transport exemption approval, the final leg of the robot's journey, arrival at the venue and delivery to the team pit, must be done by the team.

5.8 Important Shipping Contacts

5.8.1 *FIRST* is Your Primary Contact

If you have any questions about robot shipping rules or processes, **CALL *FIRST*!** Rules in this chapter are written and administered by *FIRST*, not FedEx. *FIRST* is not responsible for information given by representatives of outside vendors.

Additional instructions:	FRC Competition/Game Manuals
Download shipping labels and Robot Lock-up Form :	http://www.firstinspires.org/resource-library/frc/robot-transportation
Phone:	(800) 871-8326 OR (603)666-3906 - 8:30 AM to 5:00 PM ET
E-mail:	frclogistics@firstinspires.org Subject line: <i>FIRST</i> Team [your #] Shipping Question
Fax:	(603) 666-3907
Address:	Team Support/Operations 200 Bedford Street Manchester, NH 03101

5.8.2 FedEx

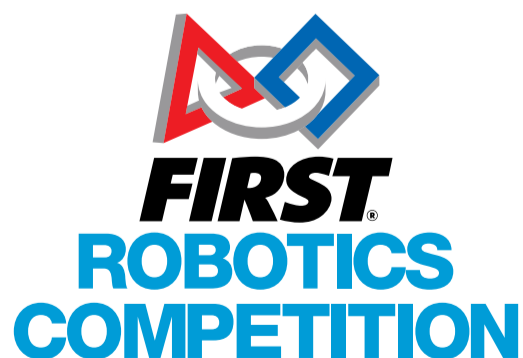
Call FedEx to schedule your pickup and with any FedEx tracking questions. Have your Bill of Lading and/or Pro Number available when you call.

Website:	www.fedex.com
Phone - FedEx Freight:	1-866-393-4585
Phone - FedEx Express:	1-800-GO-FedEx (1-800-463-3339)

6

Awards

6.1	<i>FIRST</i> Robotics Competition Awards	5
6.2	Complete Awards List.....	5
6.3	Awards Submission Process.....	8
6.3.1	Submission Dates.....	8
6.4	Chairman’s Award.....	9
6.4.1	Overview.....	9
6.4.2	NASA Grant Teams	9
6.4.3	Submission Information.....	9
6.4.4	Hall of Fame	10
6.4.5	Submission Content	10
6.4.6	Submission Format	10
6.4.7	Submission Process.....	10
6.4.8	Interview Process and Video Requirement	15
6.4.9	The Chairman’s Award Championship Award Process	18
6.4.10	The Allaire Medal - Leadership Exemplified	18



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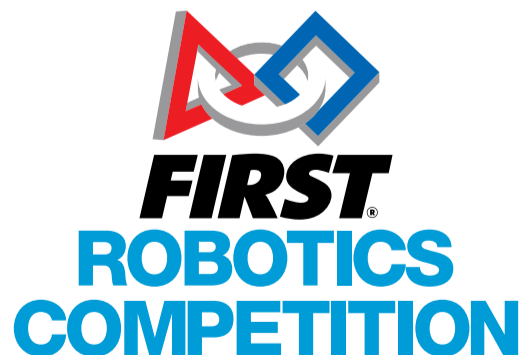
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6

Awards

6.5	<i>FIRST</i> [®] Future Innovator Award (FFIA) Sponsored by the Abbott Fund	18
6.6	<i>FIRST</i> [®] Dean's List Awards	19
6.6.1	Submissions	19
6.6.2	Criteria	20
6.6.3	<i>FIRST</i> Robotics Competition Judging	21
6.7	Media and Technology Innovation Award Sponsored by Comcast NBCUniversal	22
6.7.1	Overview	22
6.7.2	Award Criteria	22
6.7.3	Judging Criteria	22
6.7.4	Submission Process	24
6.7.5	Submission Dates	24
6.8	Woodie Flowers Award	24
6.8.1	Eligibility	24
6.8.2	Spirit of the Award	24
6.8.3	Award Eligibility Requirements	25



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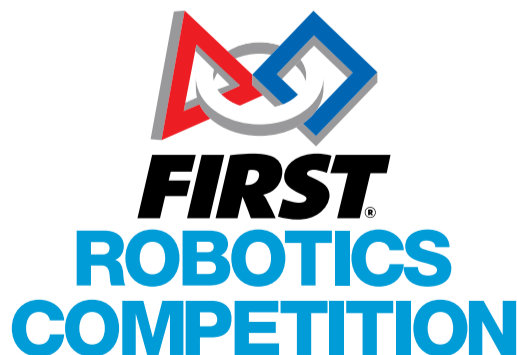
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6

Awards

6.8.4	Judging Criteria	25
6.8.5	Entry Requirements	26
6.8.6	Entry Process	26
6.8.7	Prior Year Regional WFFA Recipient Re-Submission	27
6.9	Entrepreneurship Award Sponsored by Kleiner, Perkins, Caufield & Byers	27
6.9.1	Business Plan Submission	27
6.9.2	Guidelines.....	28
6.9.3	Business Plan Template	28
6.9.4	Eligibility.....	29
6.10	FIRST Safety Animation Award Sponsored by UL	29
6.10.1	Award Overview.....	29
6.10.2	Theme.....	29
6.11	Non-Submitted Judged Awards.....	30
6.12	Awards Based on the Machine	30
6.12.1	Industrial Design Award Sponsored by General Motors	30



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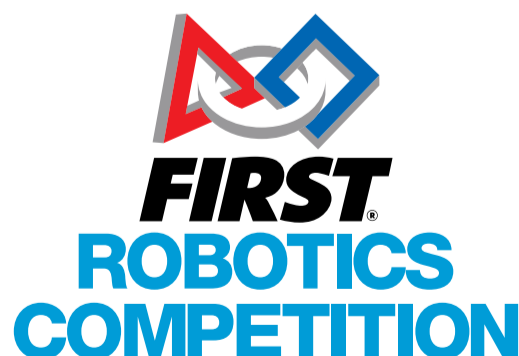
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6

Awards

6.12.2	Quality Award Sponsored by Motorola Solutions Foundation.....	30
6.13	Awards Based on Creativity and Innovation	31
6.13.1	Excellence in Engineering Award Sponsored by Delphi.....	31
6.13.2	Innovation in Control Award Sponsored by Rockwell Automation.....	31
6.13.3	Creativity Award Sponsored by Xerox	31
6.14	Awards Based on Team Attributes.....	32
6.14.1	Team Spirit Award Sponsored by FCA Foundation.....	32
6.14.2	Imagery Award in honor of Jack Kamen.....	32
6.14.3	Gracious Professionalism® Award Sponsored by Johnson & Johnson	32
6.14.4	Rookie All-Star Award	33
6.14.5	Judges Award	33
6.14.6	Rookie Inspiration Award Sponsored by National Instruments	34
6.14.7	Engineering Inspiration Award.....	34
6.14.8	Industrial Safety Award Sponsored by UL.....	34



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6 AWARDS

6.1 *FIRST* Robotics Competition Awards

The *FIRST*® Robotics Competition is about much more than the mechanics of building a robot or winning a competitive event. It is about the partnership among people who are part of the *FIRST* community and the impact on those who participate in *FIRST* programs with a united goal of achieving the *FIRST* mission.

The mission of *FIRST* 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.

This section contains descriptions of the *FIRST*® Robotics Competition Awards. Unless otherwise noted, all awards are earned at Regional events, District events, District Championships and the *FIRST* Championship.

If a team has a question during the event about the awards process, a pre-college student should go to Pit Admin to request a discussion with the Judge Advisor. Pit Admin will then get in touch with the Judge Advisor and a mutually convenient time will be arranged to meet. As with the rule regarding questions for the Head Referee in *Game Manual Section 5 (5.5.3 REFEREE Interaction)*, the expectation is the discussion will take place between a pre-college student on the team and the Judge Advisor, though mentors and other adults associated with the team may listen in. Please note that while the Judge Advisor will address questions related to the awards process in general, he or she will not address questions related to why certain teams were or were not selected for specific awards, as that would breach the confidentiality of the selection process.

For the purpose of awards at the *FIRST* Championship, team awards are given out at the Division level except the Finalist and Winner, which are given at the Subdivision level. Two Subdivisions are combined to create one Division.

6.2 Complete Awards List

Award	Description	Selected By	Regional	District	District CMP	<i>FIRST</i> CMP Division	<i>FIRST</i> CMP
Chairman's Award*	The most prestigious award at <i>FIRST</i> , it honors the team that best represents a model for other teams to emulate and best embodies the purpose and goals of <i>FIRST</i> .	Chairman's Judge Panel (application and interview process)	X	X	X		X
Creativity Award <i>Sponsored by Xerox</i>	Celebrates creativity in design, use of component, or strategy of play.	Judges	X	X	X	X	
Engineering Inspiration Award**	Celebrates outstanding success in advancing respect and appreciation for engineering within a team's school and community.	Judges	X	X	X	X	

Award	Description	Selected By	Regional	District	District CMP	FIRST CMP Division	FIRST CMP
Entrepreneurship Award* <i>Sponsored by Kleiner Perkins Caufield & Byers</i>	Celebrates the entrepreneurial spirit by recognizing a team that has developed the framework for a comprehensive business plan to scope, manage, and achieve team objectives.	Judges	X	X	X	X	
Excellence in Engineering <i>Sponsored by Delphi</i>	Celebrates an elegant and advantageous machine feature.	Judges	X	X	X	X	
FIRST Dean's List Award*	Celebrates outstanding student leaders whose passion for and effectiveness at attaining <i>FIRST</i> ideals is exemplary.	Dean's List Judge Panel (nomination & interview process)	X		X		X
FIRST Future Innovator Award* <i>Sponsored by the Abbott Fund</i>	Celebrates innovation and intellectual property creation inspired by the <i>FIRST</i> season experience.	<i>FIRST</i> Future Innovator Award Judge Panel					X
Founder's Award	Recognizes the organization or individual that has contributed significantly to the growth of <i>FIRST</i>	<i>FIRST</i> HQ					X
Gracious Professionalism Award <i>Sponsored by Johnson & Johnson</i>	Celebrates outstanding demonstration of <i>FIRST</i> Core Values such as continuous <i>Gracious Professionalism</i> and working together both on and off the playing field.	Judges	X	X	X	X	
Highest Rookie Seed Award	Celebrates the highest-seeded rookie team at the conclusion of the qualifying rounds	Robot Performance	X	X	X	X	
Imagery Award <i>In honor of Jack Kamen</i>	In honor of Jack Kamen, Dean's father, for his dedication to art and illustration and his devotion to <i>FIRST</i> . This award celebrates attractiveness in engineering and outstanding visual aesthetic integration of machine and team appearance.	Judges	X	X	X	X	
Industrial Design Award <i>Sponsored by General Motors</i>	Celebrates form and function in an efficiently designed machine that effectively addresses the game challenge	Judges	X	X	X	X	
Industrial Safety Award <i>Sponsored by UL</i>	Celebrates the team that progresses beyond safety fundamentals by using innovative ways to eliminate or protect against hazards.	Safety Advisors	X	X	X	X	

Award	Description	Selected By	Regional	District	District CMP	FIRST CMP Division	FIRST CMP
Innovation in Control Award <i>Sponsored by Rockwell Automation</i>	Celebrates an innovative control system or application of control components—electrical, mechanical or software—to provide unique machine functions.	Judges	X	X	X	X	
Judges' Award	During the course of the competition, the judging panel may decide a team's unique efforts, performance, or dynamics merit recognition.	Judges	X	X	X	X	
Media & Technology Innovation Award* <i>Sponsored by Comcast NBCUniversal</i>	Award recognizes the team that develops and implements the most outstanding digital experience, marketing strategy, and rationale for digital channels to disseminate content to its audience and further the <i>FIRST</i> mission.	Comcast NBCUniversal					X
Quality Award <i>Sponsored by Motorola Solutions Foundation</i>	Celebrates machine robustness in concept and fabrication.	Judges	X	X	X	X	
Rookie All Star Award	Celebrates the rookie team exemplifying a young but strong partnership effort, as well as implementing the mission of <i>FIRST</i> to inspire students to learn more about science and technology	Judges	X	X	X	X	
Rookie Inspiration Award <i>Sponsored by National Instruments</i>	Celebrates a rookie team's outstanding success in advancing respect and appreciation for engineering and engineers, both within their school, as well as in their community.	Judges	X	X	X	X	
Safety Animation Award* <i>Sponsored by UL (This is a pre-season award)</i>	Recognizes the team that submits a short animated film that best promotes the current season's team safety focus.	UL Selection Panel					
Team Spirit Award <i>Sponsored by FCA Foundation</i>	Celebrates extraordinary enthusiasm and spirit through exceptional partnership and teamwork furthering the objectives of <i>FIRST</i> .	Judges	X	X	X	X	
Volunteer of the Year Award <i>(optional)</i>	Presented to an individual, business, or organization that consistently excels in their efforts with proven results in the areas of Impact, Leadership, Personal Commitment, Community and Historical Contributions.	Regional/ District Planning Committee	X		X		X

Award	Description	Selected By	Regional	District	District CMP	FIRST CMP Division	FIRST CMP
Woodie Flowers Award* <i>Sponsored by Dr. William Murphy</i>	Is presented to an outstanding Mentor in the robotics competition who best leads, inspires, and empowers their team using excellent communication skills.	WFA Committee	X		X		X
Finalist	Celebrates the alliance that makes it to the final match of the competition	Robot Performance	X	X	X	X***	X
Winner	Celebrates the alliance that wins the final match of the competition	Robot Performance	X	X	X	X***	X

*Teams need to submit for these Awards, see [Section 6.3 Awards Submission Process](#).

**NASA is generously sponsoring the registration fees to the 2016 *FIRST* Championship for teams earning the Engineering Inspiration Award at District Championships and Regionals that occur within the United States. They are also sponsoring the 2017 *FIRST* Championship registration fees for the four teams that earn the Engineering Inspiration Award at the 2016 *FIRST* Championship.

***These awards are given at the CMP Sub-Division Level instead of the Division Level.

6.3 Awards Submission Process

The Main or Alternate contact for your team must assign at least one (1) and up to four (4) student award submitters in *FIRST* Robotics Competition TIMS. Those students will be notified of their status via email and may then log into Youth Team Member Registration System (STIMS) and be able to view the awards submission section on their main page.

Chairman's Award, Entrepreneurship Award, Media and Technology Innovation Award, Safety Animation Award, and Woodie Flowers Award must be submitted through the [Youth Team Member Registration System](#) (STIMS). The *FIRST* Dean's List Award must be submitted by the team's main or alternate contact through [TIMS](#).

By making a submission the Submitter irrevocably grants to *FIRST* and the *FIRST* designees the right to use any or all of the submission in any and all media for the purpose of describing the submission, describing the Award, and/or otherwise promoting.

6.3.1 Submission Dates

Submission open and close dates will be as follows (All award submissions will open at Noon Eastern Time and close at 3PM Eastern Time unless otherwise stated.)

Award	Open Date	Close Date
FIRST Future Innovator Award	Tuesday, May 12, 2015	Friday, October 30, 2015
Safety Animation	Thursday, November 12, 2015	Thursday, January 21, 2016
Chairman's Award	Thursday, November 12, 2015	Thursday, February 04, 2016

Woodie Flowers Award	Thursday, November 12, 2015	Thursday, February 04, 2016
Entrepreneurship Award	Thursday, November 12, 2015	Thursday, February 11, 2016
FIRST Dean's List	Thursday, November 12, 2015	Thursday, February 11, 2016
Media and Technology Innovation Award	Monday, February 01, 2016 Midnight ET	Monday, February 29, 2016 Midnight ET

6.4 Chairman's Award

The Chairman's Award is the most prestigious award at *FIRST*, it honors the team that best represents a model for other teams to emulate and best embodies the purpose and goals of *FIRST*.

It was created to keep the central focus of *FIRST* Robotics Competition on the ultimate goal of transforming the culture in ways that will inspire greater levels of respect and honor for science and technology, as well as encouraging more of today's youth to become scientists, engineers, and technologists.

6.4.1 Overview

The concept of the Chairman's Award includes Regional and District Championship Chairman's Awards, which enable *FIRST* to recognize more teams for their exemplary efforts in spreading the *FIRST* message, as well as their talents in organizing materials for their presentations.

Because the Chairman's Award recognizes sustained excellence and impact, not just a one (1) year team effort, it is not possible for a *FIRST* year (rookie) team to receive the Chairman's Award, Rookie Teams will NOT be considered for the award, are NOT required to provide a Chairman's Award video, and will not be interviewed, as Chairman's Award judging resources are limited.

The teams who have earned the Regional and District Championship Chairman's Award can travel to the *FIRST* Championship to be considered for the Chairman's Award.

6.4.2 NASA Grant Teams

All teams that received a NASA Grant, including rookie recipients, must prepare a Chairman's Award submission on line through the [Youth Team Member Registration System \(STIMS\)](#) as part of the grant requirement.

All teams are encouraged to print a copy of their final submission for their records and to confirm for themselves that the submission was accepted.

6.4.3 Submission Information

The criterion for the Chairman's Award has special emphasis on recent accomplishments in both the current season, and the preceding two to five years. The judges focus on teams' activities over a sustained period, as distinguished from just the six (6) week design and build period.

Teams are eligible for the Chairman's Award at each Regional or eligible District event at which they are competing. Teams will be restricted to earning this award only once at each level of competition. In other words, once a team has earned a Chairman's Award at a Regional or District event, they may not earn it again that season at a later Regional or District Event. Note that this applies to District teams who travel to Regionals as well. A District team earning a Chairman's Award at a District event may not earn it again at a later Regional. District teams who participate in inter-district play are not eligible for the Chairman's Award at those events.

FIRST will present a Chairman's Award at each Regional and District event. Chairman's Award recipients from District events will go forward to be considered at the District Championship.

The recipients from the Regional events and the District Championships will be eligible for the Chairman's Award presented at the *FIRST* Championship.

6.4.4 Hall of Fame

Hall of Fame members; i.e., teams that have already earned the Championship Chairman's Award, are ineligible to resubmit for consideration for five (5) years.

6.4.5 Submission Content

The Chairman's Award is presented to the team judged to have created the best partnership effort among team participants and which best exemplified the true meaning of *FIRST* through measurable impact on its participants, school, and community at large.

The *FIRST* Robotics Competition is not about machines; it is about the experience of people working together toward a shared goal. Documenting and preserving your team's *FIRST* experience becomes an important component of the over-all *FIRST* experience.

6.4.6 Submission Format

The Essay, excluding the Executive Summary, will be limited to 10,000 characters, including spaces and punctuation, and may include up to four (4) images totaling no more than 1.0Mb of memory.

6.4.7 Submission Process

Students must submit their team's Chairman's Award submission through the *FIRST* [Youth Team Member Registration System \(STIMS\)](#). Follow the directions shown on the site to submit your team's entry. Submission dates are listed in [Section 6.3.1 Submission Dates](#).

Submitters must enter information, save it, and return to the site to edit the Chairman's Award submission until they are ready to finalize it for final judging. All entries must be finalized by the deadline listed in [Section 6.3.1 Submission Dates](#). No entries will be accepted or altered after this deadline.

Chairman's Award submitters will go into [Youth Team Member Registration System \(STIMS\)](#) and enter the following required information:

- Team Number
- Team Name/Nickname
- Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the current season and the preceding two to five years
- Describe the impact of the *FIRST* program on your community with special emphasis on the current season and the preceding two to five years
- Describe the team's innovative or creative method to spread the *FIRST* message
- Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate
- Team's initiatives to help start or form other *FIRST* Robotics Competition teams

- Describe the team's initiatives to help start or form other *FIRST* teams (including *FIRST* LEGO League Jr., *FIRST* LEGO League, & *FIRST* Tech Challenge)
- Describe the team's initiatives on assisting other *FIRST* teams (including *FIRST* LEGO League Jr., *FIRST* LEGO League, & *FIRST* Tech Challenge) with progressing through the *FIRST* program
- Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (including *FIRST* LEGO League Jr., *FIRST* LEGO League, & *FIRST* Tech Challenge)
- Describe your Corporate/University Sponsors
- Describe the strength of your partnership with your sponsors with special emphasis on the current season and the preceding two to five years
- For *FIRST* Robotics Competition teams older than 5 years, briefly describe your team's broader impact from its inception
- Describe how your team would explain what *FIRST* is to someone who has never heard of it
- Briefly describe other matters of interest to the *FIRST* Judges, if any
- Upload up to four (4) images (optional)
- Essay (10,000 characters allowed, including spaces and punctuation, or approximately 1500 words): Judges encourage creativity of expression but the essay must clearly deliver information and facts describing what the team is all about. The essay should draw attention to the strengths of the team. This essay, along with the other information, will serve as the basis for the judges to make the decision on which team earns the Chairman's Award.
- Chairman's Award submissions are posted on a private, password-protected site where only the judges and authorized *FIRST* staff can read the entries. Please note: By making a submission the Submitter irrevocably grants to *FIRST* and *FIRST* designees the right to use any or all of the submission in any and all media for the purpose of describing the submission, describing the Award, and/or otherwise promoting *FIRST* and *FIRST* programs.

Judges at each regional and district event will be interviewing the candidates who successfully completed the submission process. Teams should always print and bring a hard copy of their submission to the event.

In preparing this document, bear in mind that students, engineers, teachers, community, school, sponsors, families, and other supporters are all integral parts of your team experience. Your submission needs to clearly convey the factors outlined above.

Important Note: Chairman's Award Judges also review the information entered in the Judges Information Page as part of the Chairman's Award submission. This information is entered as part of the [Team Information Management System \(TIMS\)](#).

6.4.7.1 SUBMISSION AWARD DEFINITIONS

All teams are required to adhere to the following Team Support Definitions in their Chairman's Award submissions and during their Chairman's Award interviews.

Team Support Definitions

Started (a *FIRST* LEGO League Jr. / *FIRST* LEGO League / *FIRST* Tech Challenge / *FIRST* Robotics Competition team) - A Team has **Started** a team if they have met one of the following requirements:

- Funded or sourced funding (i.e. grants or sponsorship) of at least 50% of the team registration fee.
- Made the team aware of *FIRST* and/or the specific program and assisted the team with the official registration process.

As well as

- The **Started** Team would agree that the Starting team did provide this level of support.

The intent of this definition is to make it clear when a team is responsible for bringing a new group into a specific *FIRST* program. Keys here are helping with funding OR introducing the new group to *FIRST* and helping them get registered as a team in their specific program.

Cases where one team has **Started** another team will be rare. Cases where one team has **Mentored** or **Assisted** a team through their initial phases are very valuable, however they are distinct from **Starting** a team.

Mentored (a *FIRST* LEGO League Jr. / *FIRST* LEGO League / *FIRST* Tech Challenge / *FIRST* Robotics Competition team) - A Team has **Mentored** a team if they have met all of the following requirements:

- Providing consistent (at least once a week during the lead up to competitions (e.g. *FIRST* Robotics Competition Build Season) communication, either in person or via phone/email/video conference, to the **Mentored** team helping with technical or non-technical *FIRST* program specific issues.
- The **Mentored** team would agree that the **Mentoring** team did provide this level of support.

Examples of **Mentoring** a team include, but aren't limited to:

- Team A regularly sends students to a nearby school to help their *FIRST* LEGO League team(s) with their robot design and project presentations.
- Team A sends an email to Team B asking for advice on future robot design. The two teams email back and forth over a period of time exchanging questions and answers.
- Team A meets Team B at a competition. Team B expresses concern their team is struggling to keep the team going and is looking for help. The two teams live far away from each other, but over the next year, they exchange many emails, they video chat a few times during the off-season and even meet in person.

Examples of not **Mentoring** a team include, but aren't limited to:

- Answering a single email question.
- Inviting a team to your shop so they may make parts on your machinery.
- Hosting a team in your build space during inclement weather when they are unable to access their own facilities.
- Giving a robot part to another team.

Assisted (a *FIRST* LEGO League Jr. / *FIRST* LEGO League / *FIRST* Tech Challenge / *FIRST* Robotics Competition team) - A team has **Assisted** a team if they have met all of the following requirements:

- Providing communication, either in person or via phone/email/video conference, to the **Assisted** team, helping with technical or non-technical *FIRST* program specific issues, OR providing funding and/or supplies to the **Assisted** team.
- The **Assisted** Team would agree that the **Assisting** team did provide this level of support.

Assisting a team is a form of **Mentorship**, however it does not require the long term or consistent communication that is a defining characteristic of **Mentorship**. It is expected that all *FIRST* Robotics Competition teams are constantly assisting their fellow *FIRST* teams, and it is not necessary to try and document or count all the instances of **Assisting** that your team has participated in.

Examples of **Assisting** a team include, but aren't limited to:

- Answering a single email question.
- Inviting a Team to your shop so they may make parts on your machinery.
- Hosting a Team in your build space during inclement weather when they are unable to access their own facilities.
- Giving a robot part to another Team.

Provided Published Resources (a *FIRST* LEGO League Jr. / *FIRST* LEGO League / *FIRST* Tech Challenge / *FIRST* Robotics Competition team) – A team has **Provided Published Resources** to a team if they have met all of the following requirements:

- The team has created resources designed to aid teams with technical or non-technical *FIRST* program specific issues.
- The resources have been published or presented publicly (e.g. presented at a conference, published on a team website, etc.)

Many *FIRST* Robotics Competition teams have created a wealth of resources that benefit numerous teams. This kind of assistance is enormously valuable to our community and is heavily encouraged. However these acts do not meet the definition of **Mentoring** since they lack consistent communication involved in mentoring. In an effort to recognize and encourage these important efforts, the definition of **Provided Published Resources** was created. We encourage teams to continue these efforts, as well as documenting the impact they have had by monitoring things like team attendance at conferences, number of page views/downloads, etc.

Examples of **Providing Published Resources** include, but aren't limited to:

- Team A creates and publishes a scouting database compiling statistical data from competitions, and the database is downloaded and used by other Teams
- Team A creates and gives a presentation on *FIRST* Robotics Competition fundraising to an audience of 15 local *FIRST* Robotics Competition and *FIRST* Tech Challenge teams.
- Team A develops and publishes a mobile app that contains *FIRST* LEGO League tutorials, and the app is downloaded and used by *FIRST* LEGO League teams
- Team A creates and publishes *FIRST* Robotics Competition drivetrain video tutorials on YouTube, and videos are watched and used by *FIRST* Robotics Competition teams

Event Support Definitions:

Ran (a *FIRST* LEGO League Jr. / *FIRST* LEGO League / *FIRST* Tech Challenge / *FIRST* Robotics Competition event) - A Team **Ran** an event if they have met all of the following requirements:

- Team members are involved in the majority of the planning of the event.
- Team members are involved in the majority of the on-site event execution, or have arranged for and are supervising the volunteers to handle the majority of the on-site event execution.

Running an event essentially means that this event would not be possible without the efforts and actions of the given team. The team in question must be responsible for the majority of the work that goes into the event.

One example of **Running** an event is:

- Team A act as the majority of the planning committee for an *FIRST* LEGO League event, and team members recruit and train the event volunteers.

Hosted (a *FIRST* LEGO League Jr. / *FIRST* LEGO League / *FIRST* Tech Challenge / *FIRST* Robotics Competition event) - A Team has **Hosted** an event if they have met one of the following requirements:

- The event takes place at a team facility
- The event takes place at a facility arranged for by the team

Hosting an event occurs when a team opens one of their own facilities or arranges for a facility to allow for an event to occur. Often teams will **Run** and **Host** the same event, but these terms do not have to be necessarily linked.

Assisted (a *FIRST* LEGO League Jr. / *FIRST* LEGO League / *FIRST* Tech Challenge / *FIRST* Robotics Competition event) - A Team has **Assisted** an event if they have met any of the following requirements:

- Team members are involved in some part of the planning of the event.
- Team members are involved in some part of the on-site event execution (i.e. Team members have volunteered at the event)

Teams **Assist** events by helping with the planning or execution of the event. This is less encompassing than **Running** an event. It is expected that many *FIRST* Robotics Competition teams will **Assist** with events through their normal actions, and it is not necessary to try and document or count all the instances of **Assisting** that your team has participated in.

Examples of **Assisting** an event include, but aren't limited to:

- Having a few team members volunteer at an event
- Having a few mentors serve on a large planning committee for an *FIRST* Robotics Competition district event

6.4.8 Interview Process and Video Requirement

Eligible teams that submitted for the Chairman's Award will need to sign up at pit admin and provide a Chairman's Award Video Consent Form in order to be interviewed by the Judges at the event. If a team does not sign up for an interview slot, they will be considered ineligible to earn the Chairman's Award at that event. Chairman's Award interviews are limited to twelve (12) minutes total; up to seven (7) minutes

for a presentation by the team (which includes set-up) and up to five (5) minutes of question and answer led by the Judges. Not more than three (3) student team members, plus one (1) adult mentor, are allowed to attend the interview. Only student (non-mentor) team members are allowed to present information and answer questions from the Judges. The one (1) adult mentor from the team who may attend may observe and later provide feedback to the team, but the mentor is not allowed to provide any assistance during the interview itself. If the mentor provides any assistance during the interview, the team will be downgraded. Exception: If necessary, the adult mentor may provide translation services for students needing foreign language or sign language translation so the students and Judges may communicate. This adult mentor may provide no assistance to the team other than translation service.

Returning this Year: Written feedback forms. Teams desiring written feedback from Judges will be able to receive it upon request. To receive feedback, teams submitting for Chairman's Award must fill out their Team Number and Team name on the Chairman's Award [feedback form](#) and provide it to the Judges at the beginning of their Chairman's Award interview. Completed forms will be available at the end of the event. We are requiring teams to request feedback before they receive it to help ensure Judging resources are not invested in teams not interested in receiving feedback.

Teams submitting for the Chairman's Award must provide a Video to the judges at the start of their Chairman's Award interview. The content of the video should explain what the team has done to earn the Chairman's Award. The video content may be in the team's native language, but if that language is not English, the team must add English subtitles to be eligible for the Chairman's Award at any event in the US or Canada, or at any non-US or Canadian event at which their native language is not generally spoken. The video may be shown to the judges during the team's seven (7) minute presentation time or the team can choose to not show the video during the presentation time. Even if the video is NOT shown during the interview, a Video and Chairman's Award Video Consent Form must still be provided to the Judges in order for the team to be considered for the Chairman's Award. In addition, the team must provide the equipment for viewing (i.e. laptop/speakers etc.) the video if they intend to show it during their interview. Teams who do not submit a Video to the judges will not be considered eligible for the Chairman's Award and will not be interviewed by the judges. This is applicable at all events including the *FIRST* Championship.

Note: Any team that submitted for the Chairman's Award and wants their Video back at the end of the event will need to collect their Video, after the awards ceremony, from Pit Administration. In addition, the team earning Chairman's Award will also be required to bring a copy of their Video to the FIRST Championship.

The Video format should be as follows:

- A 16:9 ("widescreen aspect ratio")
- Not more than 3 minutes long, no shorter than 1 minute long.
- Include a clean audio track
- Free of copyright restrictions, including music.
- May be presented to Judges as a DVD or on a USB Flash Drive

Video may consist of:

- Video footage
- Voice over/music over still photographs
- Animated presentation
- PowerPoint converted to VIDEO format

Sound

- Should be clear of pops and hisses

Copyright:

- If using copyrighted music must have written permission
- If using Creative Commons Music (CCM) on line, the music must be used in accordance with the appropriate license and properly attributed.
- Music may not contain offensive or suggestive language

Content Guidelines:

- Please show us what you are doing to earn the Chairman's Award
- Please do not identify minors by full name, use only first names.

Other required information to be given to the judges:

- Permission for *FIRST* to use your video in marketing & promotional material and/or live at *FIRST* events & competitions ([CA Video Use Consent Form](#))

DVD Requirements

- Ensure that your DVD is actually a DVD file, playable with a standard DVD player. If we cannot view your DVD, you may be ineligible for the award. Test your DVD before submitting it.
- DVD itself must be labeled with your team number and team name
- DVD case or envelope must also be labeled with your team number and team name
- A completed Chairman's Award Video Consent Form (see above) must be folded and included in the DVD case or envelope.

USB Flash Drive Requirements

- USB Flash Drive must contain only the Chairman's Award video file. Test that the file is playable before submitting the USB Flash Drive.
- Video file must be in the QuickTime (.mov) or Windows Media (.wmv) file format compressed with the H.264/MPEG-4 codec
- USB Flash Drive itself must be labeled with your team number, at a minimum. If you have room, please add your team name as well. Consider using a label maker or a piece of tape and permanent marker. Ensure the label is secure and the team number is easily read.
- To reduce the chance of the USB Flash Drive being misplaced, the Drive must be placed in a clear, sealable plastic bag before it is given to the Judges. Label the bag with team number and name. This label may be a piece of paper, printed with the required information, inserted in the bag and oriented so it may be read without opening the bag
- A completed Chairman's Award Video Consent Form (see above) must be folded and included in the plastic bag.

Note: The Chairman's Award is our highest honor and teams who receive the Chairman's Award represent the highest standards of FIRST. When the Chairman's judges have narrowed the selection to two or three teams, these contenders for the Chairman's Award at all events will have their VIDEO viewed by the Judge Advisor for appropriate content and to ensure that the above guidelines have been

met. Although the Chairman's judges will not be judging your video as part of your submission, a VIDEO with inappropriate content will disqualify a team for the award.

Tips, Timelines & Tools

- [Chairman's Award Video Helpful Tips and Guidelines](#)
- [Chairman's Award Video Suggested Shot List](#)
- [Chairman's Award Video Suggested Timeline](#)
- [Chairman's Award Video Tape Log](#) (example)
- [Chairman's Award Video Tape Log](#) (blank)
- [Chairman's Award Video Consent & Release Form](#)

Regional/District CMP Chairman's Award

Team's that have earned the Chairman's Award at a Regional or District Championship will be requested via email from *FIRST* HQ to submit a copy of their official Chairman's Award Video and a video of their presentation for posting along with their online submission. These will be used as resources for current and future Chairman's Award submitting teams. We want other teams to be able to see what it takes to be selected for this most prestigious award.

6.4.9 The Chairman's Award Championship Award Process

At the *FIRST* Championship, a panel of judges will interview teams and review the submissions from all the Regional and District Championship Chairman's Award recipients and will select one winning Chairman's Award recipient. This team has the additional honor of choosing one of its junior or senior student members to receive the Allaire Medal.

6.4.10 The Allaire Medal - Leadership Exemplified

The Allaire Medal recognizes leadership exemplified and is awarded to an individual student on the team selected as the Chairman's Award team.

Named in honor of Paul A. Allaire, a long-serving *FIRST* Chairman of the Board, the Allaire Medal is given to the student who has demonstrated outstanding leadership on his/her *FIRST* team, within his/her school and community and whose personal character best embodies the spirit of *FIRST*.

The team earning The Chairman's Award at the Championship will select the Allaire Medal recipient. The adult and student team members of the Chairman's Award team determine the recipient. The recipient must be a high school junior or senior who has been accepted into a four (4) year degree program at a college or university. The Allaire Medalist receives the Allaire medallion and up to \$10,000 in total scholarship support for undergraduate tuition, room/board and fees/books at his or her intended university or college.

6.5 *FIRST*® Future Innovator Award (FFIA) Sponsored by the Abbott Fund

The *FIRST* Future Innovator Award (FFIA) recognizes creativity in effectively solving a real-world, complex problem through the invention of a unique solution beyond the requirements of the *FIRST* competition season. Sponsored by the [Abbott Fund](#), this award directly links to the *FIRST* mission to inspire young people to be science and technology leaders and to the *FIRST* vision to transform culture by creating a world

where science and technology are celebrated. For more information on this Award please visit the [FFIA website](#).

6.6 *FIRST*® Dean's List Awards

In an effort to recognize the leadership and dedication of *FIRST*'s most outstanding secondary school students, the Kamen family sponsors awards for selected 10th or 11th grade* students known as the *FIRST* Robotics Competition® *FIRST* Dean's List and the *FIRST* Tech Challenge *FIRST* Dean's List.

Similar to the very prestigious National Merit Scholarship Award, there are three (3) levels of *FIRST* Dean's List Award students.

- *FIRST* Robotics Competition & *FIRST* Tech Challenge *FIRST* Dean's List Semi-finalists, the group of two(2) students in their 10th or 11th school year nominated by each *FIRST* Robotics Competition or *FIRST* Tech Challenge team as applicable.
- *FIRST* Robotics Competition & *FIRST* Tech Challenge *FIRST* Dean's List Finalists comprised of the two (2) students selected at each *FIRST* Tech Challenge Championship Tournament, *FIRST* Robotics Competition Regional or *FIRST* Robotics Competition District Championship (the Qualifying Events). At *FIRST* Robotics Competition District Championships, more than two (2) students may be selected, depending on the size of the district.
- *FIRST* Robotics Competition & *FIRST* Tech Challenge *FIRST* Dean's List Winners for both *FIRST* Robotics Competition and *FIRST* Tech Challenge are the students selected from the applicable *FIRST* Dean's List Finalists at the *FIRST* Championship.

The students who earn *FIRST* Robotics Competition or *FIRST* Tech Challenge *FIRST* Dean's List status as either a Semi-finalist, Finalist or Winner, will not only be great examples of current student leaders who have led their *FIRST* Robotics Competition or *FIRST* Tech Challenge teams and communities to increased awareness for *FIRST* and its mission while achieving personal technical expertise and accomplishment, but it is *FIRST*'s goal that all Dean's List Semi-Finalists, Finalists and Winners will continue on, post award, as great leaders of *FIRST*'s ever growing student alumni.

Since its introduction in 2010, the *FIRST* Dean's List Award has attracted the attention of prestigious colleges and universities who desire to have *FIRST* Dean's List students apply for admissions. As *FIRST* believes such interest is beneficial to our students, those students selected as Finalists and Winners will be asked to provide written consent for the release and use of certain personal information, including image, to interested colleges/universities for the sole purpose of allowing those institutions to contact the students if they wish. Colleges/universities have expressed interest in meeting *FIRST* Dean's List Award Winners and *FIRST* hopes that each team will take advantage of the opportunity to nominate two of their best students as *FIRST* Dean's list Semi-finalists.

*Note for regions of the world that do not use grade levels such as this to identify years of schooling: This award is intended for students who are two (2) to three (3) years away from entering college or university. Students that would be attending college or university in the next academic year are not eligible.

6.6.1 Submissions

After careful review of the criteria for the Dean's List Award (see [Section 6.6 *FIRST*® Dean's List Awards](#)) each *FIRST* Robotics Competition and *FIRST* Tech Challenge team is invited to nominate two student members as Semi-finalists who are 10th or 11th grade students. It's important that teams nominate only those students they believe are truly deserving of this honor. A mentor, who is not related to either of the students chosen as the team's Dean's List Semi-finalists, shall complete and submit the application to

compete for the *FIRST* Dean's List Finalist designation at one (1) qualifying event. Students previously selected as *FIRST* Dean's List Semi-finalists or Finalists in a prior year are eligible for nomination again this year provided they meet all of the criteria.

Please note: By making a submission, the Submitter irrevocably grants *FIRST* and *FIRST* designees the right to use any or all of the submission in any and all media for the purpose of describing the submission, describing the award, and/or otherwise promoting *FIRST* and *FIRST* programs.

6.6.2 Criteria

Criteria for selection of the *FIRST* Robotics Competition and *FIRST* Tech Challenge *FIRST* Dean's List Award shall include, but not be limited to a student's:

- Demonstrated leadership and commitment to the ideals of *FIRST*
- Effectiveness at increasing awareness of *FIRST* in the school and community
- Interest in and passion for a long-term commitment to *FIRST*
- Overall individual contribution to their team
- Technical expertise and passion
- Entrepreneurship and creativity
- Ability to motivate and lead fellow team members

Although a single mentor must submit the nomination, the team as a whole must verify the accuracy of the submission. *FIRST* is relying upon the team for the veracity and accuracy of the submission data.

Each entry shall include the following identifying information:

- The student's cumulative GPA; although the Dean's List Award is not a strictly academic award, the GPA may be considered when determining the outstanding students.
- Name & location of student's high school
- Number of years the student has participated in *FIRST*
- Number of years student has participated on the team
- An essay of not more than 4,000 characters attesting to why the student has been nominated. Essay should be specific about the Semi-finalist's contributions to *FIRST* generally, and to their team specifically as well as inform judges of specifics on the semi-finalist's entrepreneurial, technical, creativity, and innovation skills. Specific examples are helpful to the judges. Information about the Semi-finalist outside of *FIRST* may also be supportive of the nomination but is secondary to information about the student's participation in *FIRST*. Essay must be submitted between the dates noted in [Section 6.3.1 Submission Dates](#) of the *FIRST* Robotics Competition Admin Manual.

Applications for the *FIRST* Robotics Competition Dean's List are submitted via [TIMS](#).

A photograph of the *FIRST* Dean's List Semi-finalist is strongly encouraged, but optional, and the essay submission and such photos may be used in the promotion of the recipient and/or the award, at the discretion of *FIRST*. Finalists & Winners will be required to sign a *FIRST* media release to allow use of their likeness to sponsors contributing to the *FIRST* Dean's List recognition program and will be responsible for any taxes associated with federal/state prize requirements.

If a team is attending more than one qualifying event, the mentor must select one event at which the team's selections are to be considered. *FIRST* Robotics Competition district teams must submit their Semi-finalists at the local *FIRST* Robotics Competition District Championship.

** Note: Non-District team Mentors and semi-finalists will receive an email after the award portal closes stating at which Regional event the semi-finalist will interview. If they are from a District team, they will receive an email stating that they will receive further instructions from their District indicating at which event they will interview. The email will also include a copy of the nomination letter in order to prepare the semi-finalist for the interview.

6.6.3 *FIRST* Robotics Competition Judging

Judges will review the submissions and each Semi-finalist will be interviewed at or prior to one (1) event where their team is competing. Judges will select two (2) students at each qualifying event as *FIRST* Robotics Competition *FIRST* Dean's List Finalists. *FIRST* Robotics Competition district submissions will be reviewed and Semi-finalists interviewed at or prior to their local *FIRST* Robotics Competition District Championship with the allocated number of Dean's List Finalists chosen at each *FIRST* Robotics Competition District Championship.

All Semi-finalists will participate in a brief, 5-7 minute, live and interactive interview with a minimum of two judges. This interview does not need to be in-person at the event, though that is the preferred method. Interviews may, if necessary, be conducted by phone or video conference, as long as no less than two adults are participating in discussions with the student. Also, this interview does not need to take place concurrently with the event, it may happen beforehand, as long as every Semi-finalist is interviewed and has a fair opportunity for selection.

Students may invite a mentor to sit in the interview room for observation only. The mentor may not contribute to the interview or provide any supplemental information to judges. This mentor will be the one to provide the student feedback, in regards to their interview skills, after the interview is over. Judges will not provide feedback to the students. Exception: If necessary, an adult mentor/assistant may provide translation services for students needing foreign language or sign language translation so the students and Judges may communicate

The *FIRST* Robotics Competition *FIRST* Dean's List Finalists will be honored at the award ceremonies at the applicable qualifying event.

At the *FIRST* Championship all *FIRST* Robotics Competition and *FIRST* Tech Challenge *FIRST* Dean's List Finalists will be considered for the *FIRST* Robotics Competition and *FIRST* Tech Challenge *FIRST* Dean's List Award as applicable. No interviews will take place at *FIRST* Championship. Judges will use the essays provided and any available interview feedback. Finalists need not be present at the *FIRST* Championship in order to be considered. Ten (10) *FIRST* Robotics Competition students will be selected as *FIRST* Robotics Competition Dean's List Award Winners and ten (10) *FIRST* Tech Challenge students will be selected as *FIRST* Tech Challenge Dean's List Award Winners for the 2016 season.

The ten 2016 *FIRST* Robotics Competition *FIRST* Dean's List Award winners and ten 2016 *FIRST* Tech Challenge *FIRST* Dean's List Award winners will each receive the following:

- A unique trophy and public recognition at *FIRST* Championship
- A written recommendation from *FIRST* leadership to the college(s) or employers of their choice
- A credit towards the winning student's team's next season registration fee
- A commemorative plaque for the student's school
- An invitation for them and a chaperone to attend an expense paid *FIRST* Dean's List Award Summit at *FIRST* headquarters in Manchester, NH; and
- An opportunity to work with all members of the *FIRST* Dean's list and *FIRST* leaders to advance the Alumni mission of *FIRST*.

6.7 Media and Technology Innovation Award Sponsored by Comcast NBCUniversal

This Award recognizes the team that develops and implements the most outstanding digital experience, marketing strategy, and rationale for digital channels to disseminate content to its audience and further the *FIRST* mission.

6.7.1 Overview

With all the digital possibilities to spread the *FIRST* message, students are encouraged to take into account the numerous ways people search for and consume content and build a digital experience to both help their team in its fundraising efforts, but also share the *FIRST* experience with anyone who visits their website. Students should think broadly, considering channels (traditional sites, video applications, mobile, apps), devices (smart phones, tablets), and content (social, rich, and viral* media). We are looking for excellence in expressing the *FIRST* mission on the Internet and telling a story of who and what your team is all about. Be imaginative and creative!

6.7.2 Award Criteria

Teams are asked to develop a marketing strategy complete with rationale for digital channels / devices to disseminate content. Digital media still includes websites, but can and should be augmented with digital media for disseminating content including social, viral* and rich media.

*Viral media defined as low/zero budget and homemade content. Professionally produced content will be disqualified. Viral content is something that premieres and is spread person-to-person on the Internet.

6.7.3 Judging Criteria

Submissions will be reviewed and evaluated by a Comcast executive judging panel. This award is independent of current *FIRST* Program competition season judged awards.

The winner of the Media and Technology Innovation Award will be announced at the *FIRST* Championship.

Submissions will be judged on the following criteria, with the following weighted scale (out of a possible 100 total points):

Strategy (15 points)

- Targeting the right audience with a message that aligns with the *FIRST* mission.
- Developing a clear strategy and choice of distribution channels and content creation.
- Teams must use at least two channels. More channels are not necessarily better, but will be considered if appropriate.
- Setting and meeting clear objectives.
- Communicating a clear strategy on your website and on your written submission.

Overall Experience (15 points)

- Do content and channels fit together in look and feel?
- Are you promoting a positive impression of *FIRST* and its mission?
- Do your website and other digital media have a cohesive look? What is the overall digital user experience?

- How does your overall story come together online? Do you share a unified message and mission?
- Is the website intuitive and easy to navigate?
- Does the digital experience tell a story about the team and its *FIRST* experience?

Visual Design (10 points)

- How appealing is your design?
- Is content easy to read?
- Do you use videos and or graphics in a visually appealing way?
- Visual fit with *FIRST* – Even though the team has its own identity, is it clear that this team is a part of *FIRST*?

Navigation (10 points)

- Content organization and prioritization is being judged in this category
- Is your website simple to follow?
- Is it intuitive?
- Does it have a structure that makes sense?

Content (20 points)

- We are looking for whether the information shared is compelling and optimized for consumption.
- This should be a robust digital experience, so think about including text, sound, video, photos and social media.
- Good content should be engaging, relevant and appropriate.
- Was original content created?
- Is content kept up-to-date and refreshed regularly?
- Is content action-oriented?
- Does your site use live links?
- Do your site or digital media appropriately cite sources and not infringe on others' trademarks or copyrights?
- Does your website/channel adhere to the [FIRST Branding and Design Standards](#)?

Functionality (15 points)

- Does content load quickly?
- Does your site work with multiple/major browsers and mobile devices?
- Is the site easy to use?
- We will also consider the efficiency and utility of the site.

Engagement (15 points)

- Did your digital media engage an audience to find out more about your team or about *FIRST* and *FIRST* Progression of Programs?
- How did you track the results?
- Did you leverage your site or digital media for fundraising and/or other purposes outside of the normal scope?

6.7.4 Submission Process

Teams should upload their PDF-formatted submission through the [Comcast Media and Technology Award website](#). Submission will be accepted during the dates listed in [Section 6.3.1 Submission Dates](#).

Submissions are not to exceed two pages including graphics. The maximum allowable size for the PDF document submission is 50MB. Submissions should include and address all judging criteria addressed above. We encourage teams to clearly communicate both strategy and any results that have been tracked (include web site traffic, # of friends and/or followers, likes, etc.). This document must include applicable links, URLs and hashtags that provide access to the digital properties you created. This includes, but is not limited to, web and video sites, Facebook pages, Twitter feeds, Pinterest boards, mobile apps, etc.

By making a submission, the Submitter irrevocably grants to *FIRST* and *FIRST* designees the right to use any or all of the submission in any and all media for the purpose of describing the submission, describing the Award, and/or otherwise promoting *FIRST* and *FIRST* programs.

6.7.5 Submission Dates

Submissions will be accepted during the dates listed in [Section 6.3.1 Submission Dates](#).

You may submit your PDF more than once if you need to make revisions. The last version submitted prior to the deadline will be considered your final submission.

6.8 Woodie Flowers Award

The Woodie Flowers Award celebrates effective communication in the art and science of engineering and design. Dr. William Murphy founded this prestigious award in 1996 to recognize mentors who lead, inspire and empower using excellent communication skills.

Two subcategories are awarded:

- The Woodie Flowers Finalist Award (WFFA) is presented to one adult mentor at each Regional Competition or District Championship.
- The Woodie Flowers Award (WFA) is presented to one WFFA winner at the *FIRST* Championship

6.8.1 Eligibility

Each year, students may submit an essay nominating one mentor from their team to be considered for this award. *FIRST* will recognize one adult mentor at each Regional or District Championship to receive the WFFA. If a team already has a mentor who has received the WFFA in a prior year, then that team may re-submit that mentor in the current year in addition to nominating a mentor for the WFFA if they wish. The current year WFFA recipients, along with those mentors who received a WFFA in a prior year and have been re-nominated, will be judged to receive the WFA at the *FIRST* Championship.

6.8.2 Spirit of the Award

High school students on a *FIRST* Robotics Competition team may nominate one (1) adult team member as their Woodie Flowers Finalist Award (WFFA) candidate. The students will describe how this mentor has given them the best understanding of the challenges, opportunities and satisfaction involved in the discipline of engineering and design. Professor Flowers will lead the past Championship Woodie Flowers

Award (WFA) recipients as they judge and select the Finalists and the Championship recipient based on student essays.

This award recognizes an individual who has done an outstanding job of motivation through communication while also challenging the students to be clear and succinct in recognizing the value of communication. As such, it is very important that this be a student-led effort and a student decision. Team mentors should direct their students to the online entry site and let the high school students decide whom to nominate. Adults can help edit, but this must be a student-led effort, since any team mentor is eligible. Authors must be clearly identified as high school students in the online submission.

6.8.3 Award Eligibility Requirements

Regional WFFA (except District Event Teams) – Each team may nominate one adult member from their team to be judged at one Regional Event they are attending. The adult mentor must be on the same team as the student. Previous year WFFA recipients are not eligible to receive the current year WFFA.

District Championship WFFA (applies only to teams participating in District Events) - Each District team may nominate one adult member from their team at one District Event to be judged at the District Championship. The adult mentor must be on the same team as the student. Previous WFFA recipients are not eligible to receive the current year WFFA. One WFFA recipient will be selected at each District Championship.

FIRST Championship WFA – All prior year Regional WFFA recipients are eligible to be re-nominated for the current *FIRST* Championship Woodie Flowers Award. However, if a team has multiple prior Regional WFFA recipients, then the team may only re-nominate one of those previous recipients. The re-nomination can be made as soon as the online submission process begins. All of the Regional WFFA recipients from the current year are automatically eligible to receive the current *FIRST* Championship Woodie Flowers Award. Teams that have submitted a previous year WFFA recipient for the current *FIRST* Championship WFA and have a current Regional WFFA recipient will be asked by the WFA committee which Regional WFFA recipient from their team will be their *FIRST* Championship WFA candidate. A person may not receive the WFA more than one time.

6.8.4 Judging Criteria

Two aspects of this award are important: (1) the accomplishments in communication by the mentor and (2) the student's ability to communicate clearly and concisely through their nomination.

A specific judging criterion is based upon the team's description of how the mentor inspired each member of the team in some or all of the following ways:

- Level of student participation;
- Creativity of effort;
- Clear explanation of mathematical, scientific, and engineering concepts;
- Demonstration of enthusiasm for Science and Engineering;
- Encouragement to work on projects as a team effort;
- Inspiration to use problem-solving skills;
- Inspiration to become an effective communicator; and
- Motivation through communication.

Each *FIRST* team completes a product development cycle as it designs a concept, develops a prototype, and builds and debugs a unique machine. This requires teamwork, attention to detail, scheduling and hard work. The award-winning essay should answer this question; “How did the candidate inspire your team throughout this process?” If the essay best describes how this individual excels above all others as he or she inspires the team, then that mentor truly deserves to be recognized with the award that honors Professor Woodie Flowers and his contribution to engineering, education, and communication.

6.8.5 Entry Requirements

The students enter team and candidate information, reference information, and a maximum three thousand (3,000) character essay written in English. Teams may also add up to six (6) pictures, totaling no more than 1.0 MB of memory. This essay should be a team effort and will stand alone as the team’s entry to award their candidate the deserved recognition.

For students to re-nominate a past WFFA winner for the Championship WFA, they must write and submit a new 3,000 character essay.

Teams may only submit their WFFA candidate at one Regional or District competition for judging.

6.8.6 Entry Process

Students enter their candidate through the [Youth Team Member Registration System](#) (formerly known as STIMS).

Student nominators must follow the directions listed on the screen. As the student nominator fills out the required information, he/she will also choose their selected regional/district.

Student nominators can easily enter information, save it, and return to the site to edit their entry information until they are ready to submit it for judging. All entries must be submitted between the dates listed in [Section 6.3.1 Submission Dates](#). No entries will be accepted or altered after this date.

Students will go to the website to enter information in the following fields:

- Team Number
- Candidate Information:
 - First Name, Middle Initial, Last Name
 - Address, City, State, zip code
 - Employer
 - Occupation
 - Position on team
- High School Student Nominator’s information: (Student recommending candidate)
 - First Name, Last Name
 - Phone Number
 - High School
 - E-mail Address
 - Position on Team
 - Year in school (9th, 10th, 11th, 12th)

- Adult Reference (On the same team)
 - First Name, Last Name
 - Phone Number
 - E-mail Address
 - Position on Team
- Adult Reference (Any *FIRST* affiliation)
 - First Name, Last Name
 - Phone Number
 - E-mail Address
- Regional / District Selection (Team must attend this Regional / District)
- Upload Pictures (Up to 6, no more than 1.0 MB total)
- Essay (Character max: 3,000) - The students will see a quote from Dr. Murphy and/or Woodie about the value of concise and clear writing. Once candidates' information and essays are submitted, they are sorted and posted on a private, password-protected site where only the Judges can read the entries.

Please Note: By making a submission the Submitter irrevocably grants to FIRST and FIRST designees the right to use any or all of the submission in any and all media for the purpose of describing the submission, describing the Award, and/or otherwise promoting FIRST and FIRST programs.

6.8.7 Prior Year Regional WFFA Recipient Re-Submission

Student nominators must submit a new 3,000 character (maximum) essay in order to re-nominate their previous year Regional WFFA recipient to be eligible for the current Championship WFA. Student nominators will not be able to edit the original submission. Past winners without a new essay will not be eligible for the WFA. While the judges can review past essays, the new essay must be able to stand alone as a complete submission.

Each *FIRST* team may nominate/re-nominate a maximum of one (1) candidate for the *FIRST* Championship WFA.

6.9 Entrepreneurship Award *Sponsored by Kleiner, Perkins, Caufield & Byers*

This award celebrates the entrepreneurial spirit and recognizes a team which has developed a comprehensive business plan in order to define, manage and achieve the team's objectives. This team displays entrepreneurial enthusiasm and the vital business skills to ensure a self-sustaining program.

6.9.1 Business Plan Submission

Submissions will be accepted between the dates listed in [Section 6.3.1 Submission Dates](#).

A formal business plan must be completed and entered through the [Youth Team Member Registration System](#) (formerly known as STIMS).

In addition to submitting their business plans through STIMS, teams may create more comprehensive plans in their own style. They may then provide hard copies of these plans to judges at events to supplement the information they provide in STIMS.

6.9.2 Guidelines

- A formal business plan is submitted through [Youth Team Member Registration System](#) (formerly known as STIMS).
- The team has a clear concept or approach to building their team and functions as a complete unit.
- They assumed risks and were successful in managing that risk, dealing appropriately with adversity and unexpected events.
- They had a plan and executed it successfully.
- They understood the goals of the competition and the goals of *FIRST*.
- They demonstrated sustainability through, for example, succession and contingency planning.

6.9.3 Business Plan Template

Teams must complete the following fields in order to be considered for this award.

- **TEAM MISSION STATEMENT:** Please briefly indicate what you believe to be the “driving engine” of your team. Your mission should be clear and concise. It should represent to any reader exactly what your business plan strives to accomplish.

(1600 characters allowed, including spaces and punctuation)

- **TEAM ORIGIN:** Please provide the date that your team formed, the location of your team, the current number of team members (highlighting any growth over past years) and describe the challenges the team had to overcome in order to participate in *FIRST* events.

(1600 characters allowed, including spaces and punctuation)

- **ORGANIZATIONAL STRUCTURE:** Please detail how the team is structured to 1) Raise funds; 2) Ensure funds are properly spent; 3) Find and engage sponsors; 4) Recruit team members/mentors for current & future seasons; 5) Ensure *FIRST* principles remain core to the team’s efforts. Uploading an image of your team organizational chart below, will also satisfy this requirement.

(1600 characters allowed, including spaces and punctuation. Graphic image allowed in addition to or as an alternative to text - upload 5” x 4” 100 dpi resolution images that end in .JPG or .GIF)

- **RELATIONSHIPS:** Please detail team efforts to specifically engage, inspire, educate and retain 1) Team members; 2) Mentors; 3) Sponsors/Community.

(1600 characters allowed, including spaces and punctuation)

- **DEPLOYMENT OF RESOURCES:** Please detail how the resources of your team (Financial or otherwise) have been deployed to 1) Engage the community to spread the message of *FIRST*; 2) Inspire others to get involved so that *FIRST* continues to grow; 3) Ensure all team members get the most out of their *FIRST* experience.

(1600 characters allowed, including spaces and punctuation)

- **FUTURE PLANS:** Please indicate specific plans the team has for the next 3 years in regards to sponsorship, team and community outreach (including helping *FIRST* grow) and detail how you expect to be able to accomplish these goals.

(1600 characters allowed, including spaces and punctuation)

- **FINANCIAL STATEMENT:** Please include information on team finances (include financial statement detailing income and expenditures). Uploading an image of your team financial plan below, will also satisfy this requirement.

(1600 characters allowed, including spaces and punctuation. Graphic image allowed in addition to or as an alternative to text - upload 5" x 4" 100 dpi resolution images that end in .JPG or .GIF)

- **RISK ANALYSIS:** Please describe the team's risk mitigation plan. Present a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis or narrative that describes the team plan to identify and respond to sustainability threats.

(1600 characters allowed, including spaces and punctuation)

- **PICTURES**

Picture 1: Please upload 5" x 4" 100 dpi resolution images that end in .JPG or .GIF

Picture 2: Please upload 5" x 4" 100 dpi resolution images that end in .JPG or .GIF

Picture 3: Please upload 5" x 4" 100 dpi resolution images that end in .JPG or .GIF

Picture 4: Please upload 5" x 4" 100 dpi resolution images that end in .JPG or .GIF

Entrepreneurship Award submissions are posted on a private, password-protected site where only the judges and authorized *FIRST* staff can read the entries. By making a submission the Submitter irrevocably grants to *FIRST* and *FIRST* designees the right to use any or all of the submission in any and all media for the purpose of describing the submission, describing the Award, and/or otherwise promoting *FIRST* and *FIRST* programs.

6.9.4 Eligibility

Teams are eligible to win the Entrepreneurship Award at any event they participate in.

6.10 *FIRST* Safety Animation Award Sponsored by UL

Every year, *FIRST* and UL invite teams to submit a short animated film to promote team safety.

6.10.1 Award Overview

Your team is invited to participate in the annual *FIRST* Safety Animation Contest for *FIRST* Robotics Competition student team members.

6.10.2 Theme

The topic for this year's Safety Animation Award competition is 'Working Safely with your Robot'. Every *FIRST* Robotics Competition team designs, builds, and competes with a robot. Every team also needs to work safely with their robot when it's being built and tested, when it's being moved to and from various locations at events, and when it's being moved to and from the events themselves. Create an animation showing our community the best practices for handling the robot during these times! Your animation doesn't necessarily need to show all three of these contexts, but if you can do so in a fun and engaging way – and in the time limit for the animation - please do. Also, please create videos in keeping with the medieval theme of the 2016 *FIRST* Robotics Competition season. This is not a requirement, but

we would love to select, as our winner, an animation that highlights best safety practices while keeping within our theme.

See more details about the Safety Animation Award on the [FIRST Robotics Competition Safety website](#).

6.11 Non-Submitted Judged Awards

FIRST recognizes both on-field performance and other team and robot attributes that help *FIRST* achieve its mission to change culture by inspiring young people. While a few awards are earned by teams for their on-field performance, the Judges determine the majority of the awards given at each event.

The awards *FIRST* Judges bestow fall into one of two general categories: Machine, Creativity & Innovation and Team Attribute. Machine, Creativity & Innovation awards recognize the technical accomplishments of teams in planning, designing, construction and operation/control of their robots. Team Attribute awards recognize the success of teams in developing strong partnerships with their community, recruiting members and fund raising, as well as outreach efforts to spread *FIRST*'s message of opportunity afforded by the study of math, science and technology.

The Judges select which teams will win each award described in the following sections. The guidelines listed below should not be viewed as strict criteria that must be met in order to win any award. They are guidelines only, and Judges and Judge Advisors will not answer questions from teams related to why a certain team did or did not win awards, as that would breach the confidentiality required in the selection process.

6.12 Awards Based on the Machine

6.12.1 Industrial Design Award Sponsored by General Motors

Celebrates form and function in an efficiently designed machine that effectively addresses the game challenge.

6.12.1.1 GUIDELINES

- The design is elegant and efficient (simple/executable) and practical. The entire machine reflects a system design approach, i.e., the overall machine design addresses the many functional systems that must operate together.
- Designing the machine contributes to the team's success in *FIRST* – not just in performance on the field of competition.
- Reliability and maintainability are considered in design. For example, it is capable of withstanding the rigors of the contest and servicing is easy.
- The entire machine design, or the detailed process used to develop the design, is worthy of this recognition, and not just a single component.

6.12.2 Quality Award Sponsored by Motorola Solutions Foundation

Celebrates machine robustness in concept and fabrication.

6.12.2.1 GUIDELINES

- The entire team demonstrates robustness and quality: workmanship, welds, joints, wiring, paint, pit area, tools, control panel, cart, etc.

- The machine can withstand the rigors of competition – maintaining functionality, including the use of designed-in redundancy, fail-safety etc. that may mitigate failures in competition to gain other advantages (e.g. weight).
- Workmanship is valued and planned in both the machine and support equipment.
- Building the machine contributes to the team’s success in *FIRST* – not just in performance on the field of competition.
- Execution is superb; the machine was built with a detailed plan in mind.

6.13 Awards Based on Creativity and Innovation

6.13.1 Excellence in Engineering Award *Sponsored by Delphi*

Celebrates an elegant and advantageous machine feature.

6.13.1.1 GUIDELINES

- A team spokesperson must be able to competently describe the engineered feature(s) and can trace its conception, design, manufacturing/assembly, or deployment.
- The feature(s) reflect an engineering solution to a specific problem, and it is functional and practical.
- The feature(s) are elegant and advantageous on the field of play.
- It stands up to the rigors of competition.

6.13.2 Innovation in Control Award *Sponsored by Rockwell Automation*

Celebrates an innovative control system or application of control components – electrical, mechanical or software – to provide unique machine functions.

6.13.2.1 GUIDELINES

- A team spokesperson must be able to identify and describe the controls innovation and can trace its conception, design, manufacturing/assembly, or deployment.
- The control system is innovative and unique. It is integrated with the machine, human players, strategy, etc. in concept and execution.
- The innovation is practical; it addresses the game’s challenge. It is not just a cute idea and is reliable under the stress of competition.

6.13.3 Creativity Award *Sponsored by Xerox*

Celebrates creativity in design, use of component, or strategy of play.

6.13.3.1 GUIDELINES

- A team spokesperson must be able to competently describe the creative/unique feature(s) and can trace its conception, design, manufacturing/assembly, or deployment.

- It is highly original in concept or execution.
- Since creativity may involve risk of failure, a team's appropriate response to challenges, including machine failures, can be considered.
- Its uniqueness has a practical application and contributes to the objectives of the competition. Developing it contributed to the team's success in *FIRST* – not just in performance on the field of competition.
- The team created this device/strategy rather than discovered it once the machine was built.

6.14 Awards Based on Team Attributes

6.14.1 Team Spirit Award *Sponsored by FCA Foundation*

Celebrates extraordinary enthusiasm and spirit through exceptional partnership and teamwork furthering the objectives of *FIRST*.

6.14.1.1 GUIDELINES

- Spirit is consistent both throughout the team and also throughout the contest in attitude, appearance, originality, and depth.
- The team displays obvious enthusiasm – in supporting teams, appearance, interactions with teams/Judges, etc. – at the competition.
- Spirit is part of the team and is apparent in all they do, including at their school, in their community, with sponsors and other teams, etc.
- They demonstrate spirit as a unified team.

6.14.2 Imagery Award *in honor of Jack Kamen*

In honor of Jack Kamen, Dean's father, for his dedication to art and illustration and his devotion to *FIRST*. This award celebrates attractiveness in engineering and outstanding visual aesthetic integration of machine and team appearance.

6.14.2.1 GUIDELINES

- Appearance of machine and team are integrated in an attractive theme.
- Visuals of the integrated team/machine are exceptional.
- The team theme is supportive of the principles of *FIRST*.
- The team's theme is original, can be explained by a team spokesperson, and is fitting to the objectives, character, and/or history of the team.

6.14.3 *Gracious Professionalism*[®] Award *Sponsored by Johnson & Johnson*

Celebrates outstanding demonstration of *FIRST* Core Values such as continuous Gracious Professionalism and working together both on and off the playing field.

Definition of Gracious Professionalism

- *Gracious Professionalism* is part of the ethos of *FIRST*. It's a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

- With *Gracious Professionalism*, fierce competition and mutual gain are not separate notions. Gracious professionals learn and compete like crazy, but treat one another with respect and kindness in the process. They avoid treating anyone like losers. No chest thumping tough talk, but no sticky-sweet platitudes either. Knowledge, competition, and empathy are comfortably blended.

6.14.3.1 GUIDELINES

- The team exemplifies the principles of *FIRST* in relationships with other teams and by their demonstrated *Gracious Professionalism*
- The team consistently demonstrates *Gracious Professionalism* and a positive attitude both on and off the field.
- If the team worked with another *FIRST* Robotics Competition team pre-season – they can describe the following:
 - How the collaboration was conducted during the off-season and during the build season
 - How the teams divided up tasks fairly and equitably
 - How the process of communication flowed from one team to the other
 - How working together as a group was beneficial over working independently
 - The financial impacts of working together vs working independently

6.14.4 Rookie All-Star Award

Celebrates the rookie team exemplifying a young but strong partnership effort, as well as implementing the mission of *FIRST* to inspire students to learn more about science and technology.

As there are often far fewer rookie teams than veteran teams present at events, Judges have the option of not presenting this award if they feel no rookie team competing meets the criteria.

6.14.4.1 GUIDELINES

- This team seems like a “Chairman’s Award team in the making.” (Community activities, leadership, vision, spirit, etc.)
- The team is a true partnership between school or organization and sponsors.
- The team understands what *FIRST* is really trying to accomplish – realizes that technical stuff is fun, challenging, and offers a future.
- This team has built a robot appropriate to the game’s challenges.

6.14.5 Judges Award

During the course of the competition, the judging panel may decide a team’s unique efforts, performance, or dynamics merit recognition.

6.14.5.1 GUIDELINES

- The team keeps appearing for consideration for other awards.
- Other Judges have noticed and commented on the positive aspects of the team.

- A unique happening or feature (often one that demonstrates the team has fully embraced the principles of *FIRST*) has caught a Judge's attention.

6.14.6 Rookie Inspiration Award Sponsored by National Instruments

Celebrates a rookie team's outstanding success in advancing respect and appreciation for engineering and engineers, both within their school, as well as in their community.

As there are often far fewer rookie teams than veteran teams present at events, Judges have the option of not presenting this award if they feel no rookie team competing meets the criteria.

6.14.6.1 GUIDELINES

- Effectiveness and inventiveness of the team's efforts to recruit students to engineering.
- Extent and effectiveness of the team's community outreach efforts.
- A commitment to science and technology education among the team.
- Ability to communicate understanding of the *FIRST* mission at the competition and away from it.

6.14.7 Engineering Inspiration Award

Celebrates outstanding success in advancing respect and appreciation for engineering within a team's school or organization and community.

6.14.7.1 GUIDELINES

- Extent and inventiveness of the team's efforts to recruit students to engineering with particular emphasis on the most recent year's efforts. Measurable success of those efforts.
- Extent and effectiveness of the team's community outreach efforts with particular emphasis on the most recent year's efforts. Measurable success of those efforts.
- A commitment to science and technology education among the team, school, and community.
- Achievement of the *FIRST* mission and ability to communicate that at the competition and away from it.
- Efforts are ongoing, not strictly concentrated on the build and competition season.

6.14.8 Industrial Safety Award Sponsored by UL

Celebrates the team that progresses beyond safety fundamentals by using innovative ways to eliminate or protect against hazards.

6.14.8.1 GUIDELINES

The Safety Advisors will focus on the combination of individual and team safety behaviors and safe physical conditions along with their safety outreach to other teams. This will include:

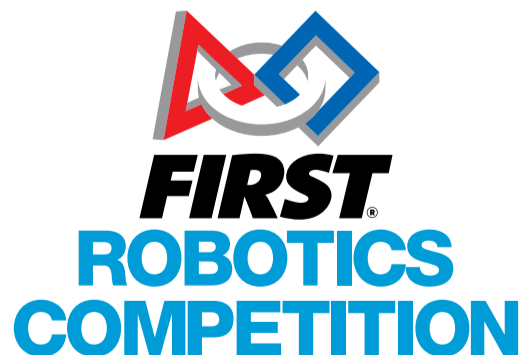
- Safe behaviors – work practices, use of tools
- PPE - wearing required personal protective equipment (e.g. Safety glasses, closed toe footwear, gloves)

- Safe Physical Conditions – workspace in pit area, condition of hand tools and power tools, power cords, safe handling of batteries and charging equipment
- Safety initiatives at the event
- Safety presentation
- Community involvement
- Special attention and recognition will be focused on:
 - Maintaining safe work practices when under time pressure
 - Wearing safety glasses in the pit stations and on the playing fields at all times
 - Control of the robot at all times
 - Safe use of hand and power tools
 - No prohibited tools in the pits, as indicated in the *FIRST* Safety Manual
 - Assisting other teams with safety issues, as needed
 - Control of the pit area regarding authorized access and visitor safety
 - Condition of the pit work surface, i.e. tripping hazards

7

Team Advancement

7.1	Overview.....	3
7.2	Pre-Qualifying Teams	3
7.3	Teams Competing at Regional Events	3
7.3.1	Qualifying Awards at Regional Events	3
7.3.2	Winning Alliance at Regional Events.....	3
7.3.3	Wild Card Slots at Regional Events	3
7.4	Teams Competing at District Events.....	4
7.4.1	District Ranking	5
7.4.1.1	Qualification Round Performance	5
7.4.1.2	Alliance Selection Results	6
7.4.1.3	Playoff Round Performance	6
7.4.1.4	Awards.....	7
7.4.1.5	Team Age	7
7.4.2	Additional Notes	7
7.4.2.1	Third/Out-of-District Event Participation	7



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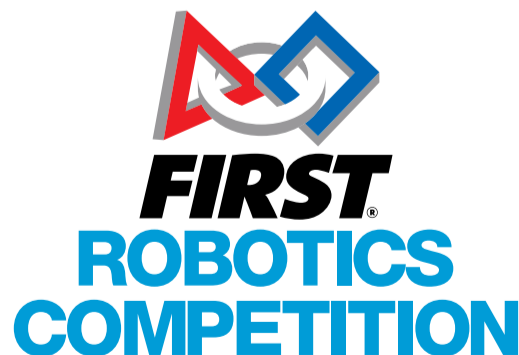
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7

Team Advancement

7.4.2.2	Regional Participation	8
7.4.2.3	Multiple Awards	8
7.4.2.4	Ties	8
7.4.3	District Championship	8
7.4.4	FIRST Championship Teams from Districts	9
7.5	Championship Waitlist	10



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7 TEAM ADVANCEMENT

7.1 Overview

Teams advance through the season in different ways depending on the events at which they compete: Regional or District Events. This section details how teams advance from Regional events to the *FIRST* Championship, and how teams advance from District Qualifying Events, to the District Championship, then to the *FIRST* Championship.

After a team is selected to attend a District Championship or *FIRST* Championship, the team's Lead Mentor 1 or Lead Mentor 2 Contact will receive an email from *FIRST* Robotics Competition Team Support with additional information and details about next steps needed to secure their registration for the event.

7.2 Pre-Qualifying Teams

Some *FIRST* Robotics Competition Teams have “pre-qualified” for the *FIRST* Championship in one of four ways:

- By being a member of the *FIRST* Hall of Fame,
- By being an original and sustaining team since 1992,
- By being one of the 2015 *FIRST* Championship winners, or
- By being one of the 2015 *FIRST* Championship Engineering Inspiration Award winners.

A list of these teams can be found in the [Championship Eligibility Criteria document](#).

7.3 Teams Competing at Regional Events

There are three ways that teams can qualify for the *FIRST* Championship while competing at a Regional Event. District teams competing at Regional events are eligible for these methods of qualification, along with all other teams present.

7.3.1 Qualifying Awards at Regional Events

Teams may qualify for the *FIRST* Championship by being selected for one of three awards: the Regional Chairman's Award, the Engineering Inspiration Award, or the Rookie All-Star Award. Details on these awards can be found in the [Section 6: Awards](#).

7.3.2 Winning Alliance at Regional Events

Teams may also qualify for the Championship Event by being on the Winning Alliance at their Regional Events. This qualification extends to all teams on the Alliance, including Back-Up Teams that were called up to play on the Alliance. More details on this method of qualification are available in the *Game Manual* [Section 5: Tournament](#).

7.3.3 Wild Card Slots at Regional Events

Finally, a team can earn a Wild Card slot at their Regional Event. Any team at a Regional who has already earned a *FIRST* Championship spot prior to the Regional and earns an additional spot at the Regional (by being on the Winning Alliance or being selected for one of the three qualifying awards) will generate a

Wild Card slot. Additionally, any team earning two qualifying spots at a single Regional (e.g. by being on the Winning Alliance and earning the Chairman's Award) will generate a Wild Card slot.

A team who has already earned a spot at *FIRST* Championship prior to the Regional and earns two qualifying spots at the Regional will generate two Wild Card slots.

A team is considered to have already earned a *FIRST* Championship spot prior to the Regional if they are a pre-qualified team per [Section 7.2 Pre-Qualifying Teams](#), earned a spot at an earlier Regional by being selected for one of the three qualifying awards per [Section 7.3.1 Qualifying Awards at Regional Events](#), are on the Winning Alliance per [Section 7.3.2 Winning Alliance at Regional Events](#), or earned a Wild Card slot per this section. Teams who have been selected from the Waitlist to participate in the *FIRST* Championship do not generate Wild Cards.

The Wild Card slots are distributed to the Finalist Alliance, in the order of team selection (Alliance Captain, 1st Pick, 2nd Pick, Back-Up team, if a Back-Up team participated), until either all Wild Card slots generated at that event are distributed or the Finalist Alliance is out of teams, whichever comes first. If a member of the Finalist Alliance has already earned a spot at the *FIRST* Championship, they are passed over and the next member of the Alliance is given the available Wild Card slot. A team may decline a Wild Card slot they have been offered, but this does not pass the Wild Card slot down to the next team in line, instead, that Wild Card slot will go unused. Unused Wild Card slots will not be backfilled or replaced.

7.4 Teams Competing at District Events

Teams will accumulate points at the first two District events they attend, within their home District, in chronological order, as well as at the District Championship. Teams will not earn any points at third or subsequent District events, nor at any inter-district events or Regional events they attend during the 2016 season.

District teams will be ranked throughout the season based on the points they accumulate. Each District will determine the number of teams they wish to have at their District Championship. Teams attending the District Championship to compete with their ROBOT will be comprised of all teams who won the Chairman's Award at District events, in addition to teams from the pre-District Championship ranked list, in order, until all slots at the District Championship are filled. If a team declines an invitation to the District Championship, the next highest uninvited team on the list will be invited, and so on, until all slots are taken. See [Section 7.4.1.4 Awards](#) for details regarding competition at the District Championship for the Engineering Inspiration and Rookie All Star awards.

Teams from outside a given District, competing at a District event under the inter-district competition program, are not eligible to be selected for the Chairman's Award, the Engineering Inspiration Award, or the Rookie All Star Award. They are eligible for all other awards. Also, as they earn no points outside their home District, they are not eligible to attend the other District's Championship event.

Points earned at District Championships will be multiplied by three and then added to points earned at District events, to determine the final season points total for the Team. Because of the size of the Michigan District Championship in 2016, a modified points system may be used, though this determination has not yet been made. If a modified points system will be used for Michigan, the information will be published in this document.

7.4.1 District Ranking

Points are awarded to teams as follows:

Point Category	Points
Qualifying Rounds	
Qualification Round Performance	$QualificationPoints(R, N, \alpha) = \left\lceil InvERF\left(\frac{N - 2R + 2}{\alpha N}\right) \left(\frac{10}{InvERF\left(\frac{1}{\alpha}\right)}\right) + 12 \right\rceil$ <p>(For typically-sized district events, this will result in a minimum of 4 points being awarded for qualification round performance. For events of all sizes, a maximum of 22 points will be awarded)</p>
Alliance Selection Results After Alliance Selection is Complete	
Alliance Captains	Equal to 17 minus the Alliance Captain Number [e.g. 14 points for Alliance #3 Captain]
Draft Order Acceptance	Equal to 17 minus the Draft Order Acceptance Number [e.g. 12 points for the Team that is 5th to accept an offer of Alliance]
Playoff Round Performance	
Teams on Alliances Advancing Playoff Level [e.g. An Alliance advancing from Quarterfinals to Semifinals]	Points awarded based on team participation in individual playoff rounds, and whether or not the alliance advances. See details below.
Awards	
Judged Team Awards	10 Points for Chairman's Award 8 Points each for Engineering Inspiration and Rookie All Star Awards 5 Points each for all other judged Team awards
Team Age	
Team Age	10 Points for Rookie Teams 5 Points for second-year Teams

7.4.1.1 QUALIFICATION ROUND PERFORMANCE

This attribute measures the individual match performance of a Team.

The calculation of Qualification performance points is done using the equation (an inverse error function) in the table above. The equation utilizes the following variables:

- R – the qualification rank of the team at the event (as reported by FMS)
- N – the number of *FIRST* Robotics Competition teams participating in the Qualification rounds at the event
- Alpha (α) – a static value (1.07) used to standardize the distribution of points at events

This formula generates an approximately normal distribution of Qualification Round Performance points at an event, based on rank, with most teams getting a moderate number of points, and fewer teams getting the highest or lowest numbers of points available.

The table below displays sample Qualification Round points for variously ranked teams at a 40 team event. The system will automatically generate the appropriate points for each team based on their rank and the number of teams at the event.

	Team rank at the end of Qualification rounds												
	1	2	3	4	.....	19	20	21	.....	37	38	39	40
Qualification Round Performance points earned	22	21	20	19	.....	13	13	12	.....	6	6	5	4

Note: Teams familiar with the points awarded for this attribute in prior years will remember that we switched away from using Win-Loss-Tie to calculate these points for the 2015 season because the game that season was not based on Win-Loss-Tie. This led to us developing a Qualification Round Performance points system focused on rank. As we considered this attribute for the 2016 game, we realized there were advantages to staying with a formula based on rank for 2016, even though the 2016 game itself includes Win-Loss-Tie as one portion of the team ranking method. Using only rank to calculate Qualification Round Performance points ensures all intended elements of the team ranking method designed into the game are taken into consideration, and helps ensure District teams are ‘playing the same game’ as Regional teams.

7.4.1.2 ALLIANCE SELECTION RESULTS

This attribute measures both individual Team qualification round seeding performance and recognition by peers.

Alliance Captains are recognized based on their qualification round seeding rank. This rank is a result of the full rules for each game, which typically incorporate several team performance attributes, and are designed to eliminate ties in rank. Non-Alliance Captains are rewarded based on peer recognition. To be invited to join an Alliance, a Team’s peers have decided that the Team has attributes that are desirable. Giving points for Alliance selection also supports come-from-behind Teams. A Team taking several matches to optimize their performance may be recognized as a late bloomer by a top seeded Team, even if that performance isn’t reflected in the rankings because of poor performance in early matches. These points also have the potential to recognize Teams employing a minority strategy with their ROBOT. Teams with unique or divergent ROBOT capabilities that complement the strengths of other alliance members may be selected to fill a strategic niche.

Note also that Alliance Captains are given the same number of points as the Team drafted in the same sequence. For example, the third Alliance Captain gets the same number of points as the third draft. Numerical analysis supports the idea that Alliance Captains are about as strong in ROBOT performance as equivalently drafted Teams. As an additional minor benefit, awarding the same points for Alliance Captains and equivalent drafts lubricates the acceptance of draft offers between Alliance Captains, which gives Teams out of the top eight the chance to experience being Alliance Captains themselves.

7.4.1.3 PLAYOFF ROUND PERFORMANCE

This attribute measures Team performance as part of an Alliance.

All Teams on the Alliance winning a particular playoff series, who participate in matches with their robots, receive 5 points per match won. In most cases, this will usually mean Teams will receive 10 points at each of the Quarter Final, Semi-Final, and Final levels, unless a backup robot is called in to play

7.4.1.4 AWARDS

This attribute measures Team performance with respect to judged Team awards.

The points earned for Team awards in this system are not intended to capture the full value of the award to the Team winning the award, or to represent the full value of the award to *FIRST*. In many ways, the Team's experience in being selected for awards, especially the Chairman's Award, the Engineering Inspiration Award, and the Rookie All Star Award, is beyond measure, and could not be fully captured in its entirety by any points-based system. Points are being assigned to awards in this system only to help Teams recognize that *FIRST* continues to be "more than robots", with the emphasis on our cultural awards, and to assist in elevating award-winning Teams above non-award winning Teams in the ranking system.

Teams earning the Chairman's Award at the District event level get automatic byes to the District Championship, where they will compete both with their ROBOTS and for the District Championship Chairman's Awards. Earning a District Championship Chairman's Award will earn the Team a slot at the *FIRST* Championship regardless of their final rank in their district.

Engineering Inspiration and Rookie All-Star Award winners at the District event level will compete at the District Championship level for those specific awards, even if they do not rank high enough to compete with their ROBOTS. Winning one of these awards at the District Championship will also earn them a slot at the *FIRST* Championship (with their ROBOT) regardless of their final rank in their Districts.

Note that Teams only get points for judged Team awards. If an award is not judged, for example, Rookie Highest Seed, or is not for a Team, for example, the Dean's List Award, no points are earned. Also, please note that the Industrial Safety Award, while it is judged by the Safety Advisors, is still considered a judged award and will earn the points indicated for the winning team.

7.4.1.5 TEAM AGE

This attribute recognizes the difficulty in being a Rookie or second year Team.

Extra points are awarded to Rookie and second year Teams in recognition of the special challenges Teams face in those early years, and to increase the chance that they will make it to the District Championship to compete with their ROBOTS. Like our dedicated Rookie awards, these additional points are intended to recognize and motivate newer participants in *FIRST* Robotics Competition. These points are awarded once at the beginning of the season. Rookie year is calculated based on the year in which *FIRST* recognizes the Team as a Rookie.

7.4.2 Additional Notes

7.4.2.1 THIRD/OUT-OF-DISTRICT EVENT PARTICIPATION

District Teams participating in three or more home District events during the season, or at any events outside of their home District, do not earn points for their actions at those events. The first two events attended inside their home District, chronologically, will be used for District point calculations. If the events are in their home District, Teams will still be eligible for all awards at those later events, and any benefits that go along with winning those awards, such as automatic advancement to the District Championship for winning Chairman's Award.

7.4.2.2 REGIONAL PARTICIPATION

District Teams do not earn points for their actions at any Regionals they may attend, but are still eligible for Team awards at those events, and any benefits that may go along with winning those awards, such as earning their way to the *FIRST* Championship. However, if a District Team does earn a slot at the *FIRST* Championship while attending a Regional event, that slot does count as part of the total Championship allocation the District is receiving for the season.

7.4.2.3 MULTIPLE AWARDS

District Teams will only be able to be selected for *FIRST* Robotics Competition’s most prestigious awards – Chairman’s Award, Engineering Inspiration Award, and Rookie All Star Award – once per season each at the District level. This supports the broader distribution of those awards.

7.4.2.4 TIES

Teams earning the same points in this system will be sorted in rank using this hierarchy:

- 1st Order Sort: Total Playoff Round Performance Points
- 2nd Order Sort: Best Playoff Round Finish at a single event
- 3rd Order Sort: Total Alliance Selection Results Points
- 4th Order Sort: Highest Qualification Round Seed or Draft Order Acceptance (i.e. Highest Alliance Selection points at a single event)
- 5th Order Sort: Total Qualification Round Performance Points
- 6th Order Sort: Highest Individual Match Score, regardless of whether that score occurred in a Qualification or Playoff match
- 7th Order Sort: Second Highest Individual Match Score, regardless of whether that score occurred in a Qualification or Playoff match
- 8th Order Sort: Third Highest Individual Match Score, regardless of whether that score occurred in a Qualification or Playoff match
- 9th Order Sort: Random Selection

7.4.3 District Championship

Team capacity at District Championships for the 2016 season will be as follows:

Chesapeake District Championship.....	58
Indiana State Championship.....	32
Michigan State Championship.....	102
Mid-Atlantic Robotics District Championship	55
North Carolina <i>FIRST</i> Robotics State Championship.....	32
New England District Championship.....	60
Pacific Northwest District Championship	64
Peachtree District State Championship.....	45

7.4.4 *FIRST* Championship Teams from Districts

Districts will receive the percentage of available slots at the *FIRST* Championship, rounded up to the nearest whole slot, equal to the percentage of teams they have in their District compared to all of *FIRST* Robotics Competition in the current season. In calculating available slots at the *FIRST* Championship, pre-qualified teams will be excluded. For team counts, this calculation uses a ‘snapshot’ of teams, that have both registered and paid, taken on a specific day a few weeks after payment for the season is due.

These allocated slots are guaranteed to the Districts. These slots will be made up of qualifying award winners from the District Championship (Chairman’s Award, Engineering Award, and Rookie All Star winners), all teams on the Winning Alliance from the District Championship (including any Back-Up teams participating), any qualifying award winners among district teams who traveled to Regionals, plus the teams on the final District ranking list, as deep in the ranking list as the District needs to go to fill their allocation. If a District team earns a slot to the *FIRST* Championship within the season, but is not able to attend for whatever reason, the top ranked team who has not yet been offered a slot is given the opportunity, and so on, until all slots are filled. District teams earning *FIRST* Championship slots at Regionals do count as part of the District allocation. Even though a District team may earn their *FIRST* Championship slot at a Regional, they are still from the District and can be considered part of the District contingent to the *FIRST* Championship.

Pre-qualified teams, as defined in [Section 7.2 Pre-Qualifying Teams](#), from a District do not count as part of their slot allocation. Districts are able to send to the *FIRST* Championship the number of teams allocated to them using the proportional representation model, plus their unique pre-qualified teams. Unlike the allocated slots, however, slots for pre-qualified teams may not be backfilled. If a pre-qualified team from a District is not able to attend the *FIRST* Championship, it will not be replaced with another team from the District. A pre-qualified team slot is reserved for that specific team only, not the District from which that team comes.

For Dean’s List Awards, Chairman’s Awards, Rookie All Star Awards, and Engineering Inspiration Awards, Districts may decide the number of awards to present at their Championships within a range established by *FIRST* Headquarters. Each District may present one or two Rookie All Star Awards and one or two Engineering Inspiration Awards. For Dean’s List Awards and Chairman’s Awards, awards count boundaries are set by ratios of the *FIRST* Championship team allocation the District has received. The table below indicates *FIRST* Championship team allocations, award limits, and the number of awards each District has selected to present at their District Championships. For the Dean’s List Award, the minimum number presented is two, and for Chairman’s Award, the minimum presented is one, regardless of District size.

District	# of <i>FIRST</i> Championship Slots Awarded	Dean's List Award			Chairman's Award			Rookie All Star Award			Engineering Inspiration Award		
		Max Ratio	Min Ratio	District Selection	Max Ratio	Min Ratio	District Selection	Min	Max	District Selection	Min	Max	District Selection
District		9	6		18	9							
Chesapeake	25	3	4	4	1	3	3	1	2	1	1	2	2
Indiana	9	2	2	2	1	1	1	1	2	1	1	2	1
Michigan	76	8	13	8	4	8	4	1	2	1	1	2	1
Mid-Atlantic Robotics	22	2	4	4	1	2	2	1	2	1	1	2	2
North Carolina	10	2	2	2	1	1	1	1	2	1	1	2	2
New England	34	4	6	6	2	4	4	1	2	1	1	2	2
Pacific Northwest	30	3	5	5	2	3	3	1	2	1	1	2	2
Peachtree	12	2	2	2	1	1	1	1	2	1	1	2	2

Allowing Districts flexibility in selecting the number of these awards to present gives them the ability to tailor their Championships to local needs. Setting upper and lower limits to these numbers allows *FIRST* Headquarters to ensure the meaning and intent of these awards has some level of consistency between Districts.

7.5 Championship Waitlist

Teams may join the Championship Waitlist to fill any remaining *FIRST* Championship slots not consumed by qualifying Regional or District teams. Teams who sign up for the Waitlist will be randomly selected at various points throughout the season in an effort to give teams as much time to make travel plans as possible while ensuring we do not exceed *FIRST* Championship capacity.

Rookies are not eligible to sign up for the Waitlist.

Teams may sign up for the Waitlist through TIMS. To do so, a team's Lead Mentor 1 or Lead Mentor 2 Contact must login to TIMS, click on the "Team Summary" button and select the "Edit/View" button in the Event Registration section.

Teams will receive a number of "entries" to get selected from the Waitlist equal to 2016 minus the last year they attended Championship (or their rookie year, or when they most recently returned as an active team, whichever year is the most recent). As examples, a team that attended in 2014 will get two entries in the waitlist drawing, a team that last attended in 2013 will get three, and a team that has never attended but has been continuously active since 2005 will get eleven.