

# SCOUTING AND STRATEGY

## OVERVIEW

Scouting in FRC is a way to analyze and record data during competitions. The data is then used to determine which teams we would like to be on our alliance and improve our chances of winning. Scouting is specifically crucial for getting a good second round pick in alliance selections. Scouting is also helpful for building match strategies in qualification and elimination rounds.

## METHODS

**Pre Scouting** - This method of scouting is generally used for the second competition or championships. Pre scouting involves looking at team statistics, averages, and placement in competition. In addition, we add a section of strengths and weaknesses for each robot to reference during qualification matches so we know how to utilize a robot in our alliance or prepare the best strategy against it. This is an advanced level of scouting but it provides information on teams before entering the competition. Of course, it is still important to scout teams at competition because robots can perform differently for many reasons at different competitions and having the most up to date data is very important.

**Pit Scouting** - Scouts will take pictures of all the robots at competition which is very useful for referencing later. Pit scouts look at the robot design, functionalities, and drive train. They must also be trained to assess the quality of construction. These pit scouts ask many technical questions about the robot to other pit crews.

**Match Scouting** - During qualification matches, scouts watch and record robot capabilities and scores on pre made scouting sheets. This helps our team determine if a robot can score, their accuracy or efficiency, their ability to defend, and other game specific abilities that we can utilize. This data can then be input to an excel document to create averages for analyzing the data.

It is important to note that not all teams may want to interview teams or spend the entire competition watching robots play. Teams may choose one method over the other or some combination of both.

## ALLIANCE SELECTION

For alliance selections it is important to create a preliminary pick list. Make sure to discuss and rank criteria of robots to create this list. The list will need to be adjusted after matches on the last day of qualifications, watch the trends of robots and overall performances. It is very risky to make a pick based on a robot's last match. Finally, the second pick is very important. Many good robots get missed in the first round and the second pick robot can make or break an alliance.

## BUILDING MATCH STRATEGIES

For effective match strategies, team's need to evaluate their robot and drive team's ability. Develop a plan for each partner in the alliance, with contingencies. The strategies should be compatible. It is also important to discard and adapt strategies as the competition goes on.

## RESOURCES

Chief Delphi is a great resource for pre scouting, because alliance captains and positions are recorded.  
<http://www.chiefdelphi.com/forums/portal.php>

SIMBOTICS provides a very helpful video on scouting and strategy.

<https://www.youtube.com/watch?v=l8syuYnXfJg&feature=youtu.be>

The Blue Alliance has many match videos, the win loss ratio and ranking at each competition, and awards.

<http://www.thebluealliance.com/>

US FIRST shows all regional and championship events and the awards, results, and standings.

<http://www.usfirst.org/roboticsprograms/frc/regional-events>