



RoboBoat Rules Primer

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www.roboboat.org

June 19-24, 2018

Reed Canal Park, Daytona Beach, FL



1. Introduction

This is a very high-level overview of the RoboBoat 2018 rules. Publishing the Preliminary Rules always takes a considerable amount of time. This document gives all prospective teams a starting point to design their vehicle at the start of the next academic year.

If you did not attend RoboBoat 2017, you will want to first familiarize yourself with the 2017 Rules as this document implies a level of familiarity with them. See: <http://goo.gl/nu1vxd>

2. Challenge Overview

We will re-use the Navigation challenge as-is. The Navigation Challenge will continue to be a hard-requirement prior to teams accruing points on any other challenge.

The Speed Challenge will be slightly altered to include an underwater acoustic beacon (ie: pinger) on the blue 'mark' buoy. Teams can use this pinger as an additional navigation aid.

The Find the Path challenge will be re-used, but with modifications. We may add additional buoys to increase the level of difficulty, but the core idea behind the challenge will remain unaltered.

The Follow the Leader challenge will be re-designed. We will continue to have a carousel with four rotating signs but in order to make this better, we are looking for feedback on what color, design, size, etc., you think would make this challenge feasible for your team. Please send us your feedback and ideas!

The Automated Docking Challenge will be reused and enhanced. The correct docking sequence will still be identified by using a combination of a pinger and a 7-segment display pointing up (for the drone). We will also add an optional expansion where additional points can be accrued if your aerial vehicle and your surface vehicle are able to collaborate on two different obstacles at once. The current idea is to have the drone actuate a sensor on the Follow the Leader which will release a 'prize' on the Automated Docking Challenge. That prize will only be valid if it is caught before hitting the water.

We will also add a new mandatory safety requirement for all surface vehicle (ie: boat): a visual feedback indicator. This new indicator will help staff and judges ensure that they understand what your vehicle is doing and stay safe. We also believe it will be a great debugging tool for your team. The visual feedback is required to have at least a green, yellow/amber and a red indicator. Our preliminary rules will include complete requirements but if you want to get an early start, you can use the [2016 RobotX's Preliminary Visual Indicator Specifications](#) as a starting point.

To help teams design their vehicle, we are also publishing our checklist for safety inspections:

- Surface Vehicle safety checklist: <http://goo.gl/LBuC5c>
- Aerial Vehicle safety checklist: <http://goo.gl/RkJqsd>

Please use these checklist as a starting point to design your vehicles. Final Rules are still the reference source for all requirements.

3. What is coming next

- We intend to complete the Preliminary Rules by November 15, 2017
- We intend to complete the Final Rules by January 31, 2017
- We will use a Google Docs document and give each team 'comment' rights. This will allow you to easily post questions and give feedback on the document.
- We intend to develop a set of "Tech Talks" to support start-up effort of new teams.

4. Feedback and Questions

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