

## Problem

Sailboat race starting lines are currently judged by line-of-sight. This is inaccurate, leading to regatta delays and occasionally incorrect penalty scoring.

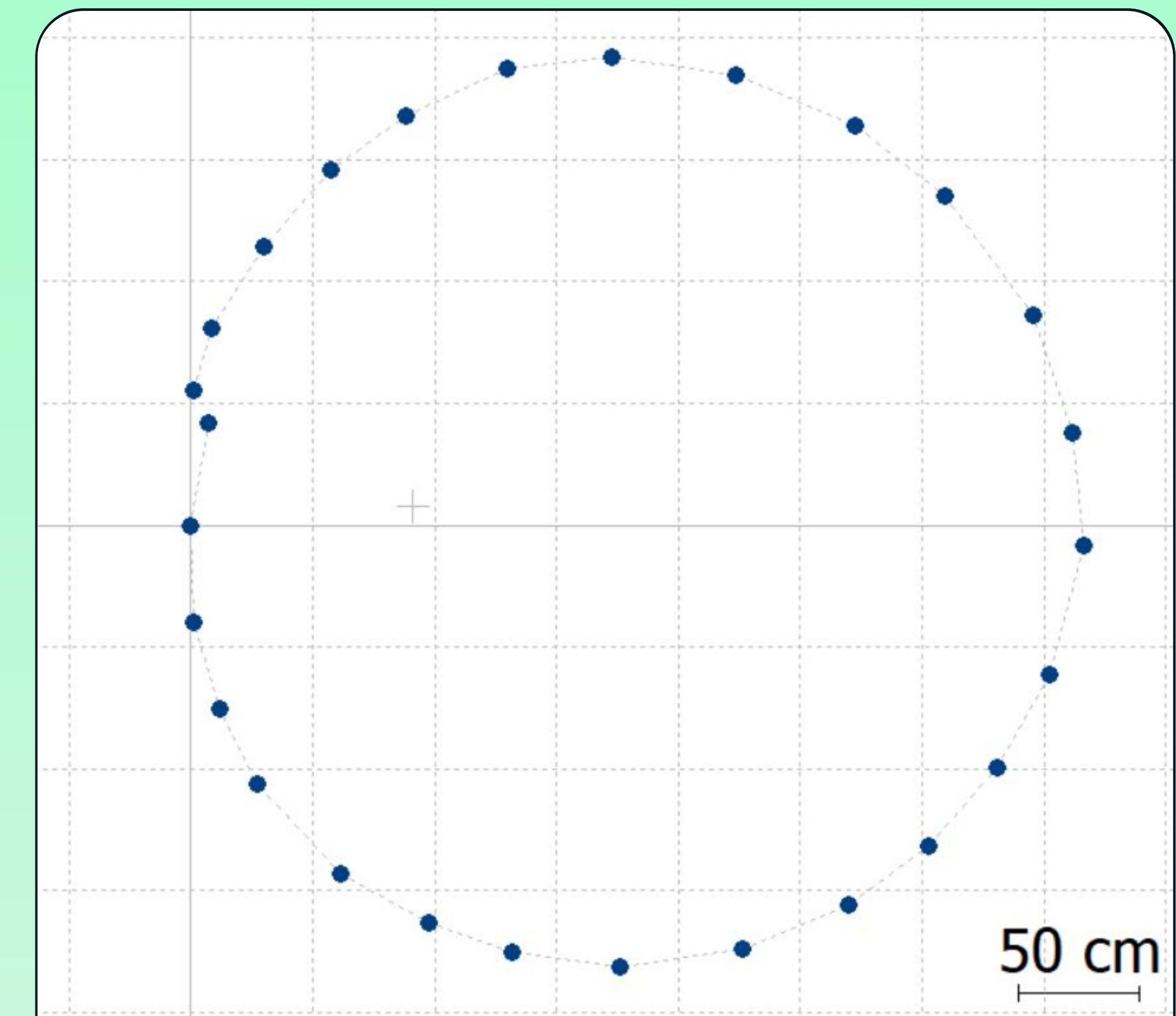
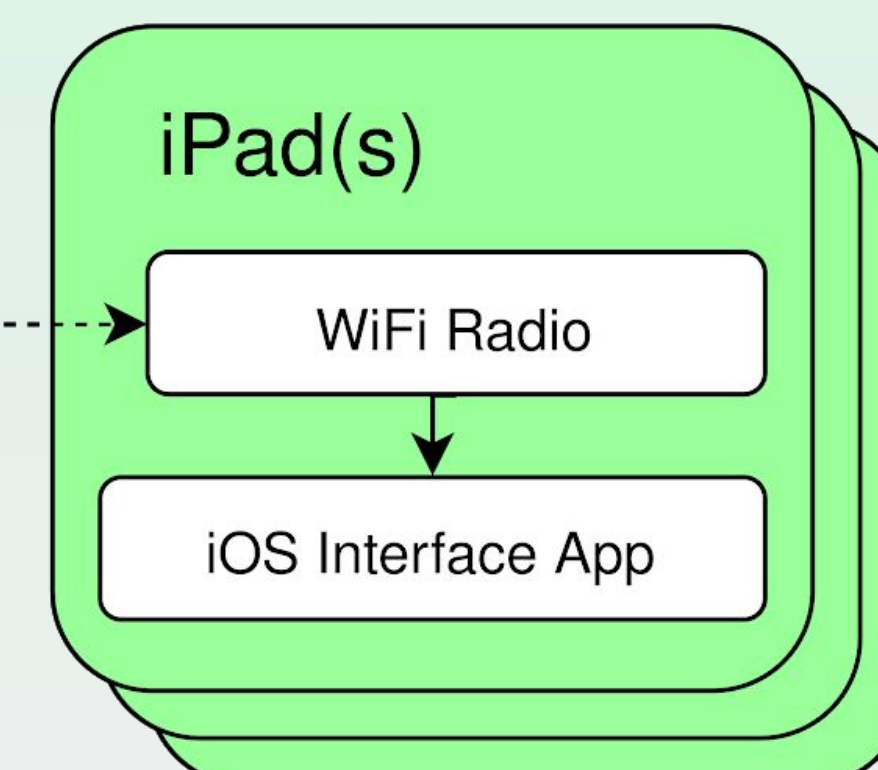
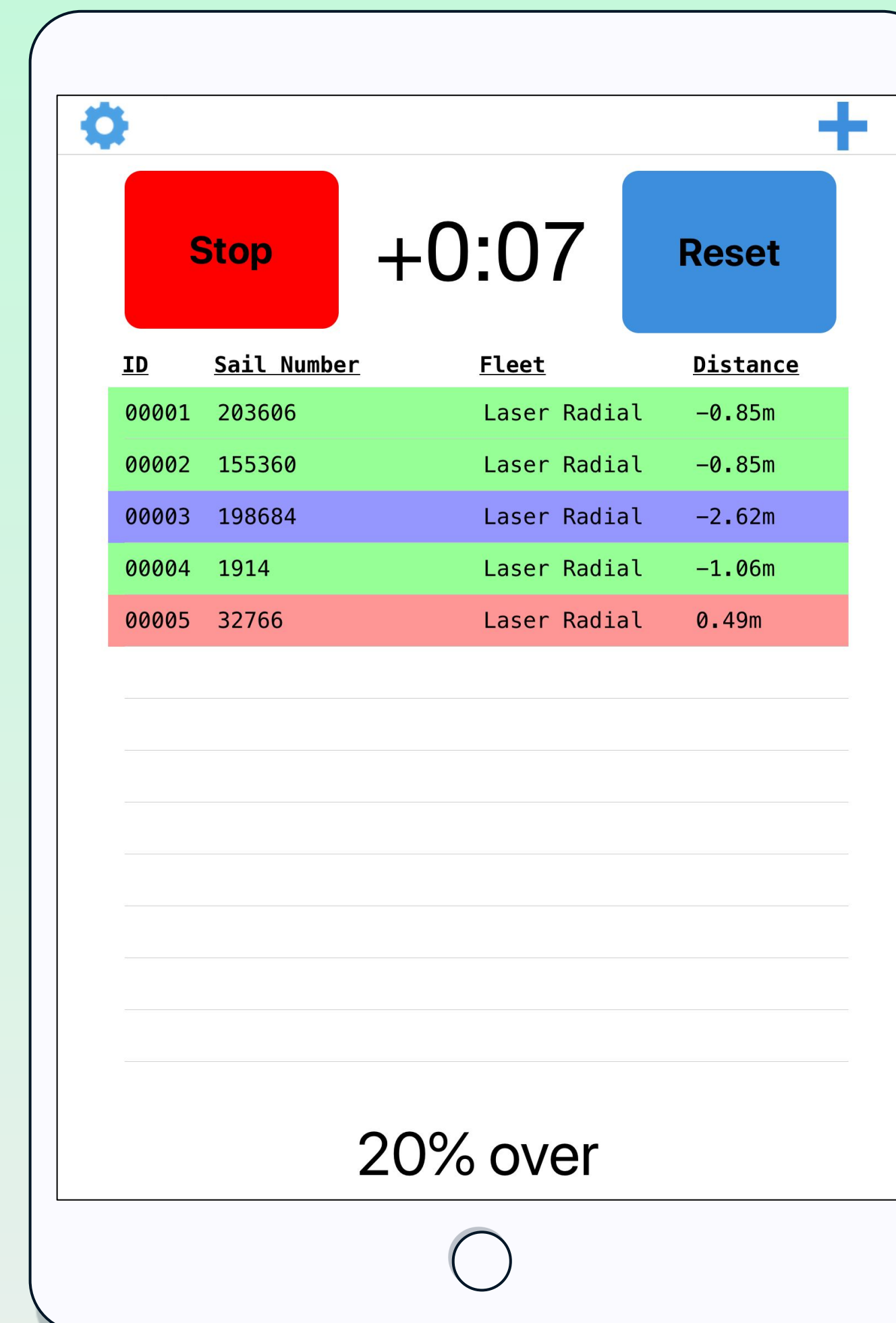
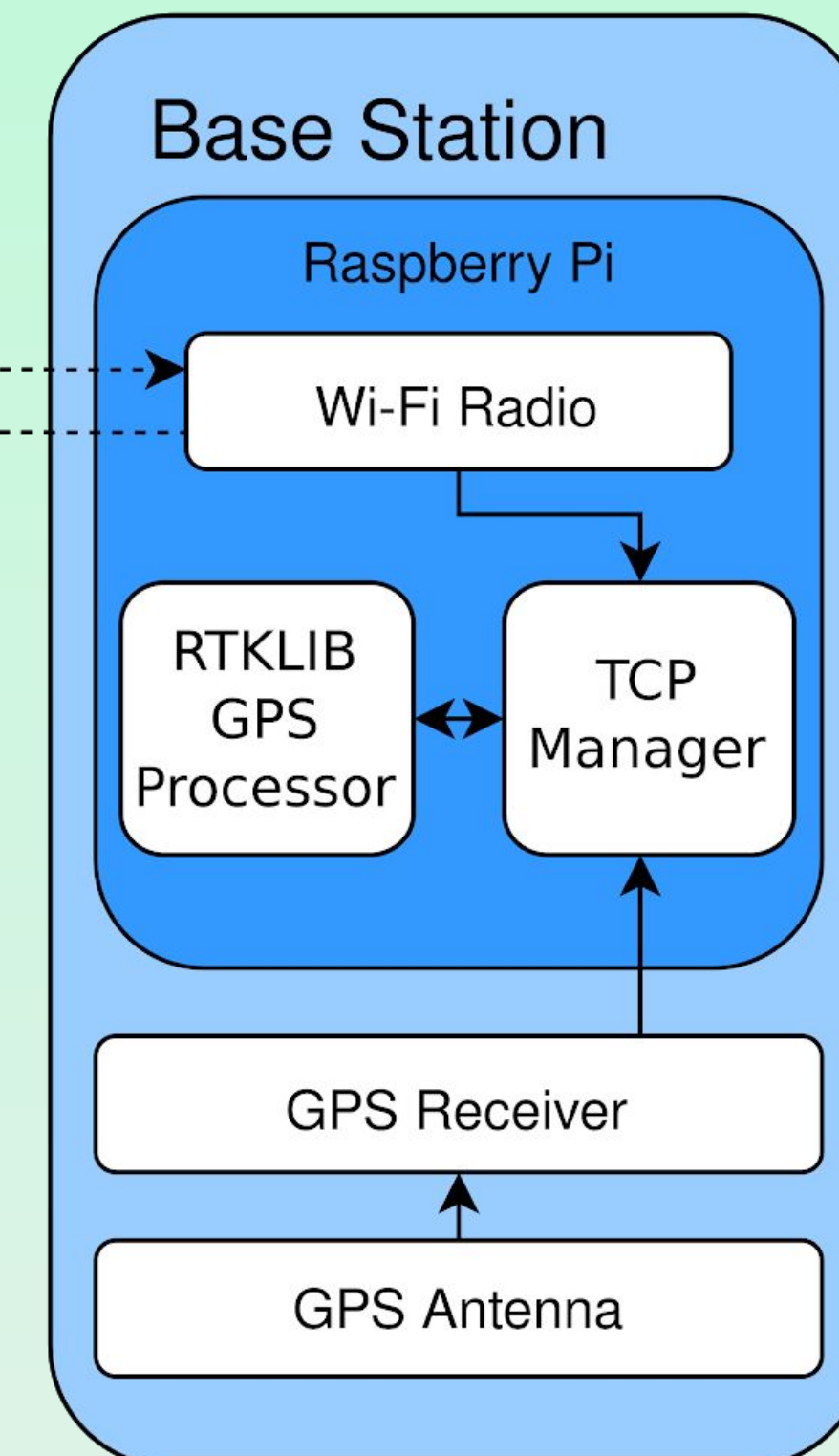
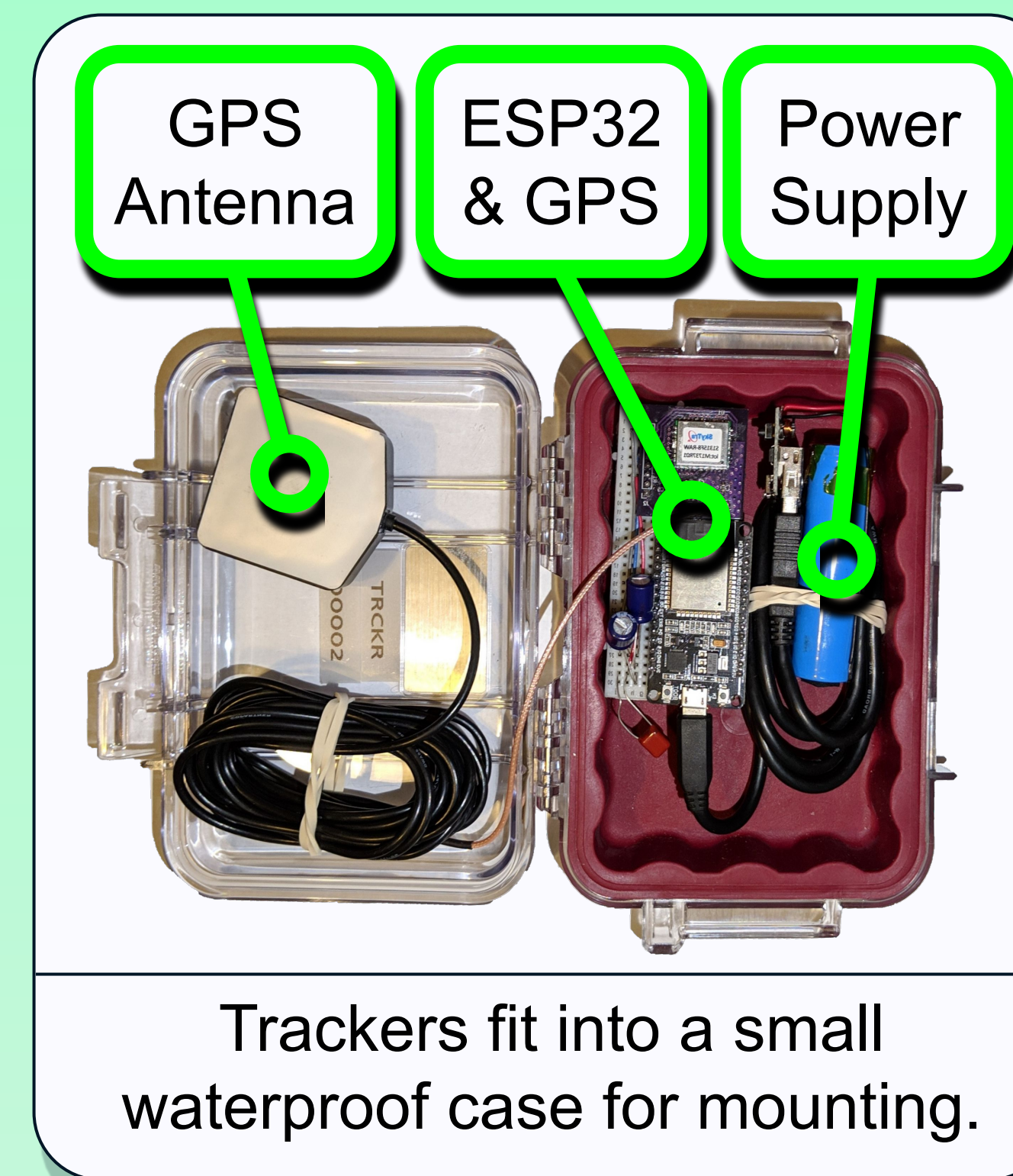
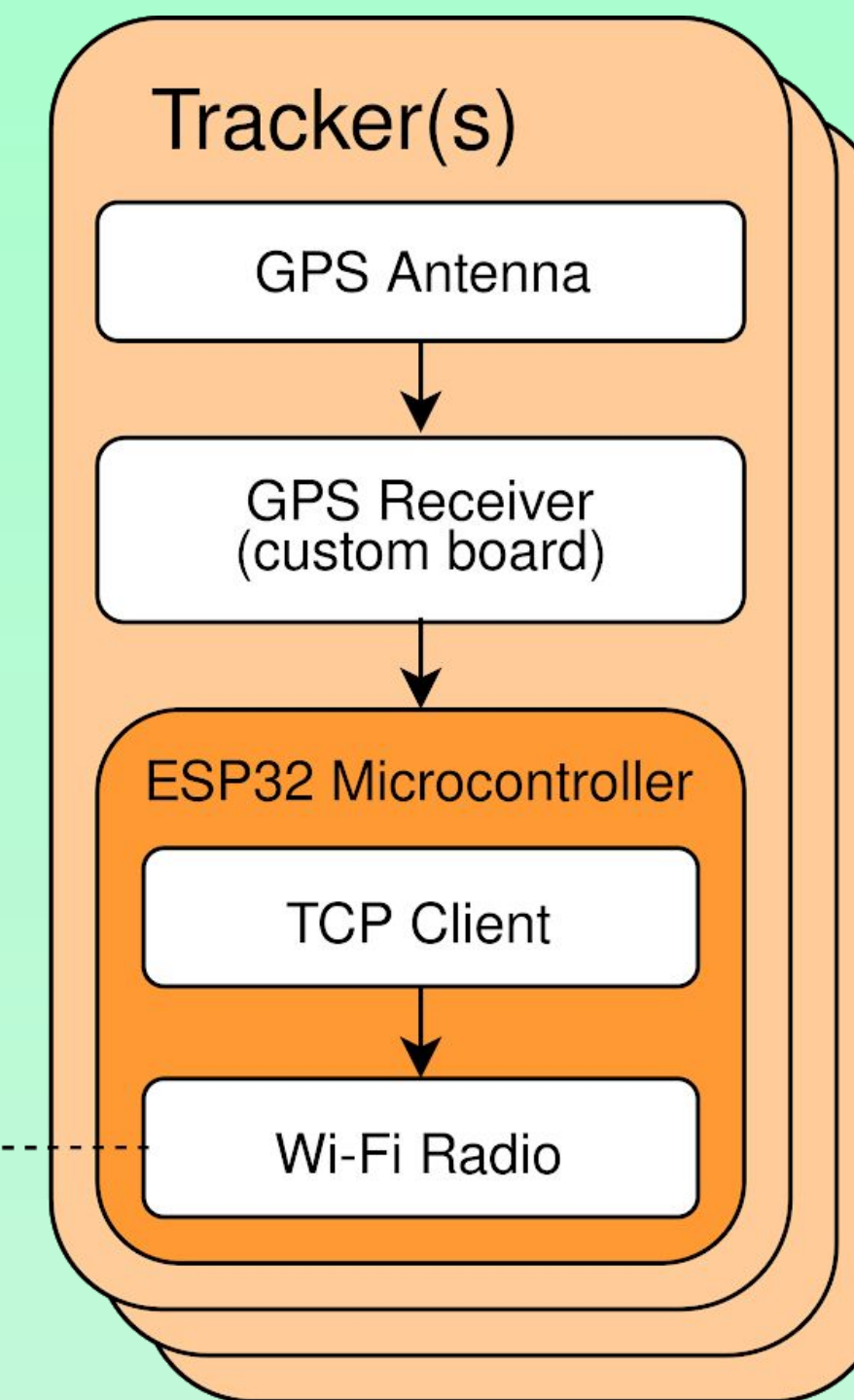


A typical view from the committee boat. The red line marks the invisible starting line from boat to pin buoy.

## Objectives

- Implement a boat tracker with sub-meter accuracy
- Use low-cost GPS hardware
- Create an intuitive iOS application

## Technologies



Recorded path during an RTK-GPS fix with the tracker anchored to the base station by a string.

## Challenges

- Interfacing with external libraries
- Coordinating open-sky GPS testing sessions
- Unreliability of obtaining RTK-GPS fixes

## Future Work

- Improve RTKLIB reliability for low-cost receivers
- Condense tracker to a single board to lower cost
- Test system stability as fleet size increases

## Acknowledgements

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