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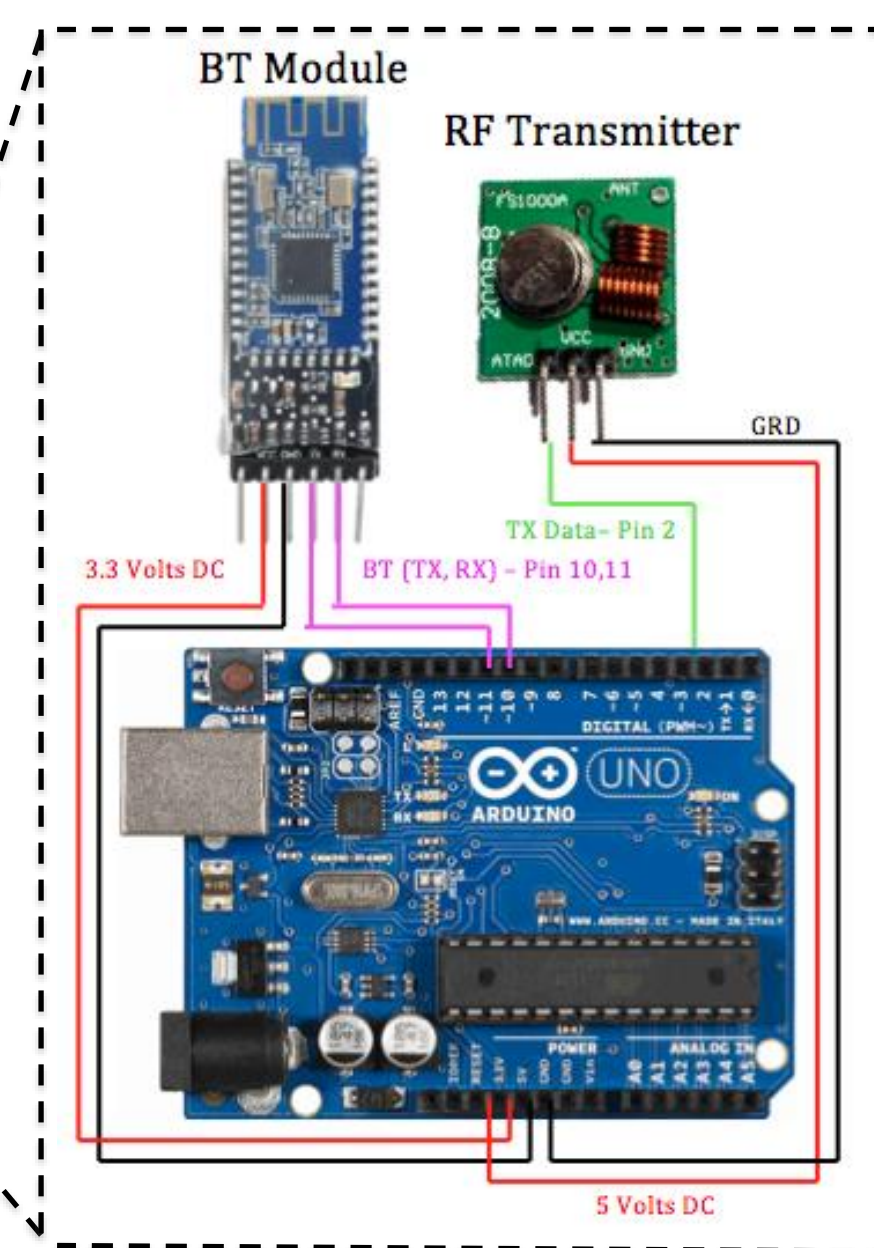
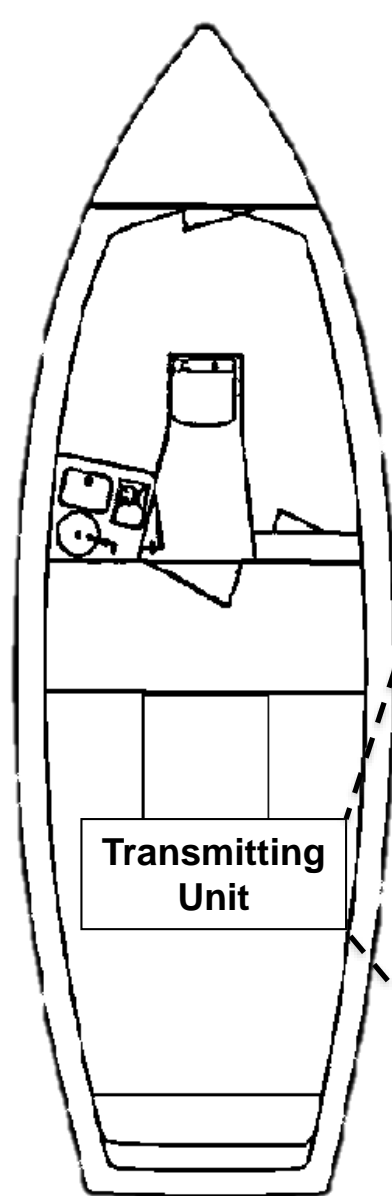
Motivation

- To contribute to technological advancements in the field of defense
- Provide state-of-the-art Heuristic training systems to law enforcement agencies, all branches of the military and private marksmanship training
- Implement mobile application controlled target systems that enhances simplicity and motion of targets

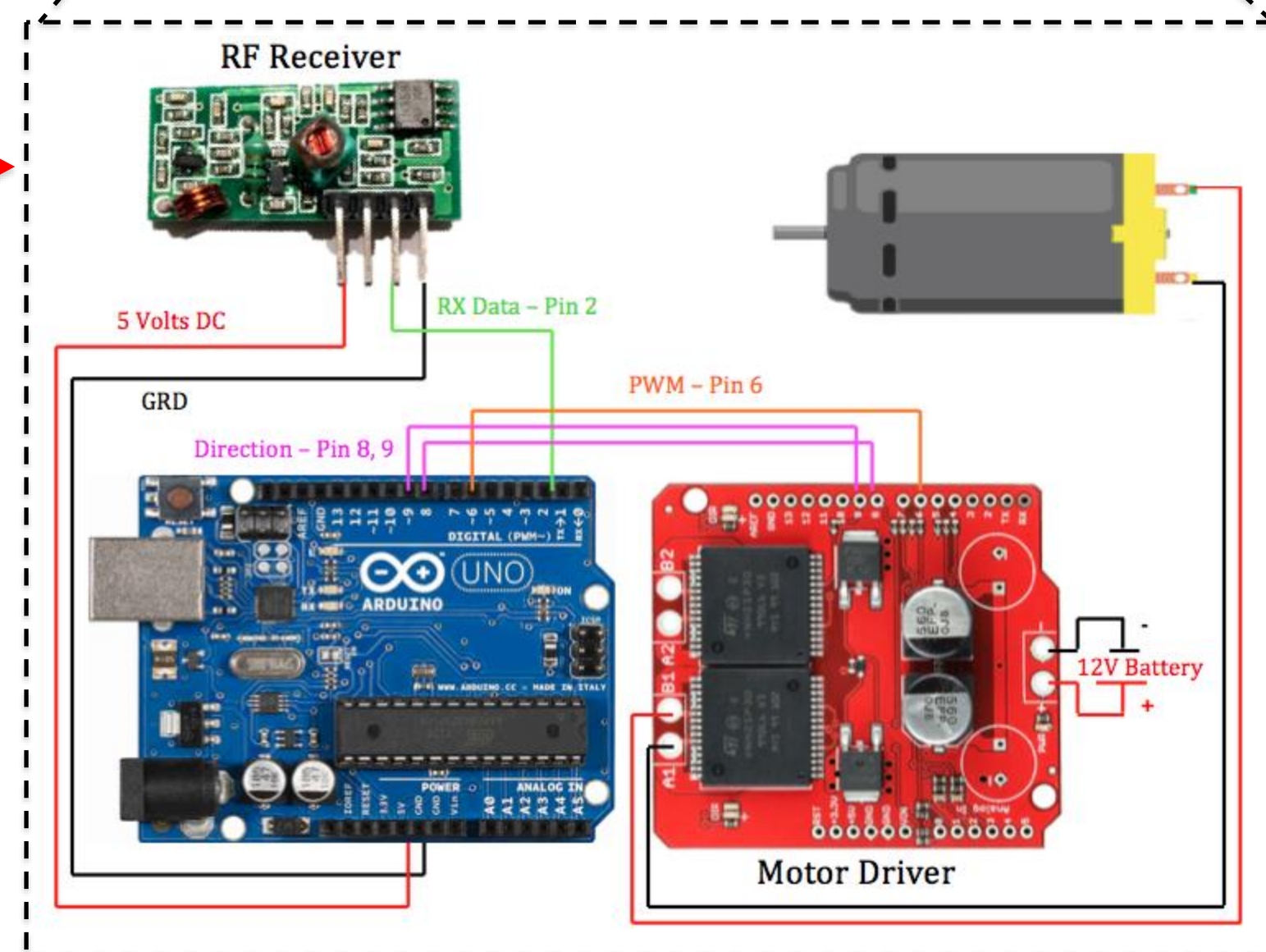
Background

- Target practice is a key form of military & police firearm training
- **Optimal Heuristic Training:** Learning to shoot while instinctually accounting for extreme environment (wind, water, unstable ground, etc.)
- Current maritime target systems on the market fall short of true heuristic training

iOS Interface

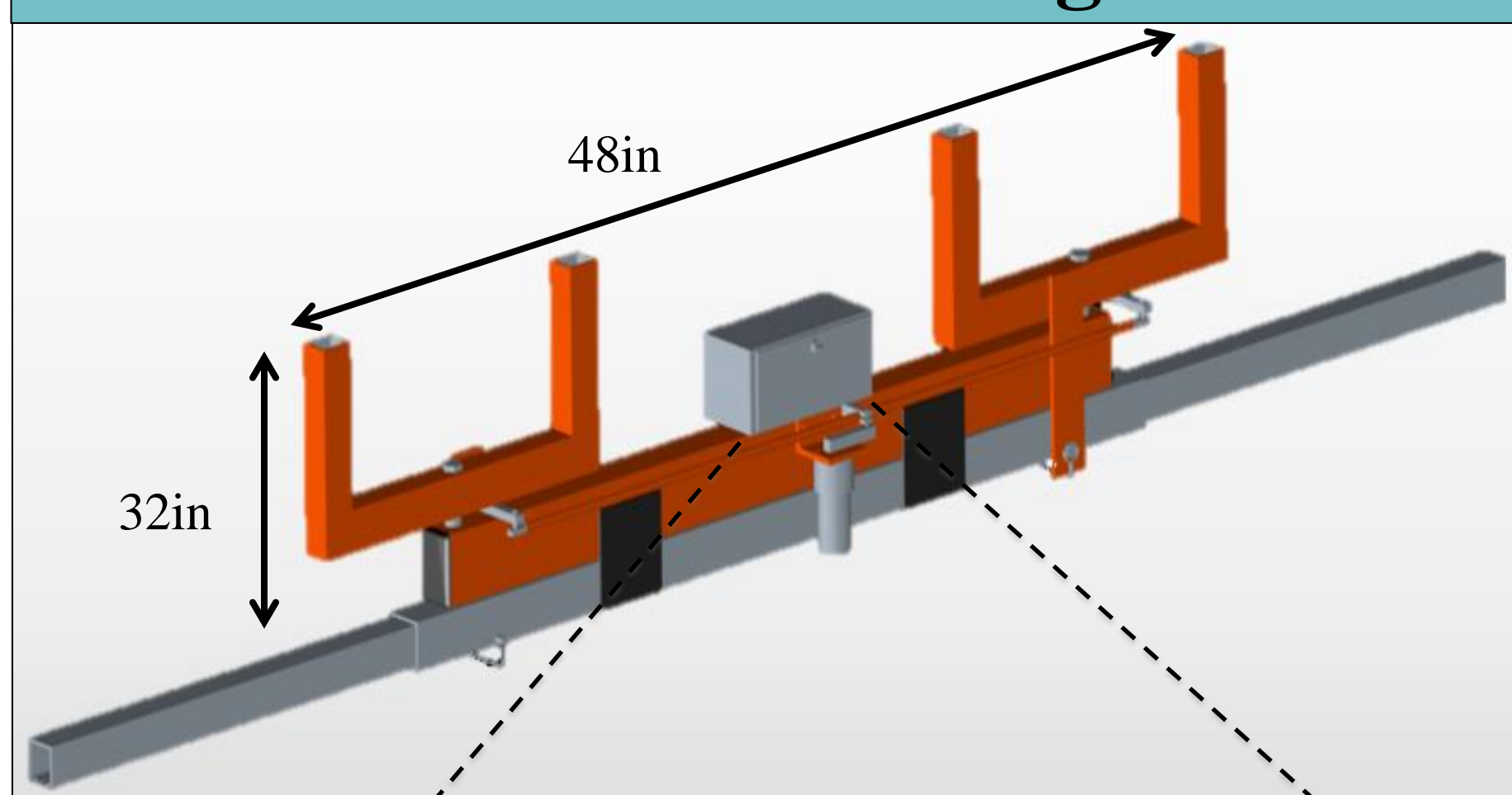


RF ~ 100m



Fully Integrated System

Mechanical Design



Objectives

- Develop a smart device app to control motion of the targets
- Maintain manufacturing affordability for marketability
- Maintain quality of materials, practicality of frame design and ease of assembly.
- Optimize motion of targets (torque, speed, user friendly routines)
- Improve mechanical stability

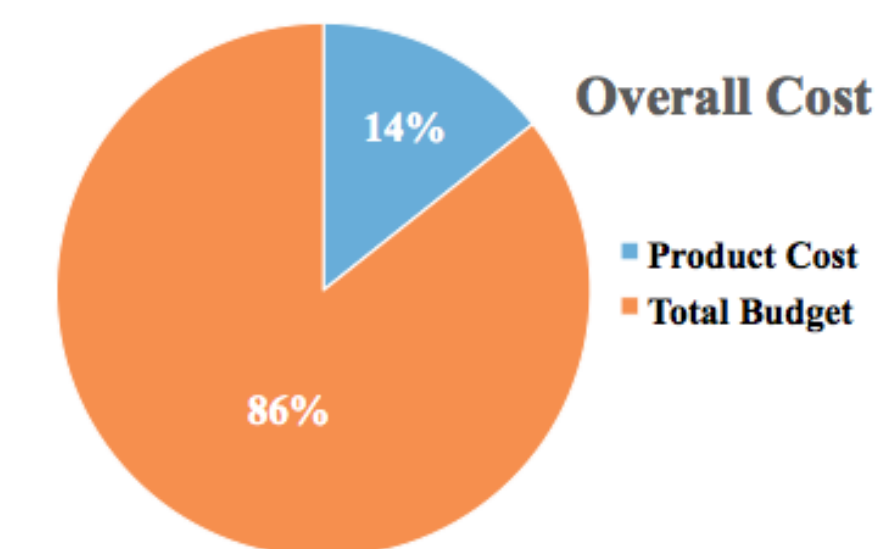
Constraints

- Controller range: at least 100 meters.
- The mechanical design needs to be waterproof to protect the electronics
- All components need to be corrosion resistant
- Servomotor power: 12V battery
- The final design must operate within the existing frame (4ft x 4ft)
- Mechanical: only use spare parts

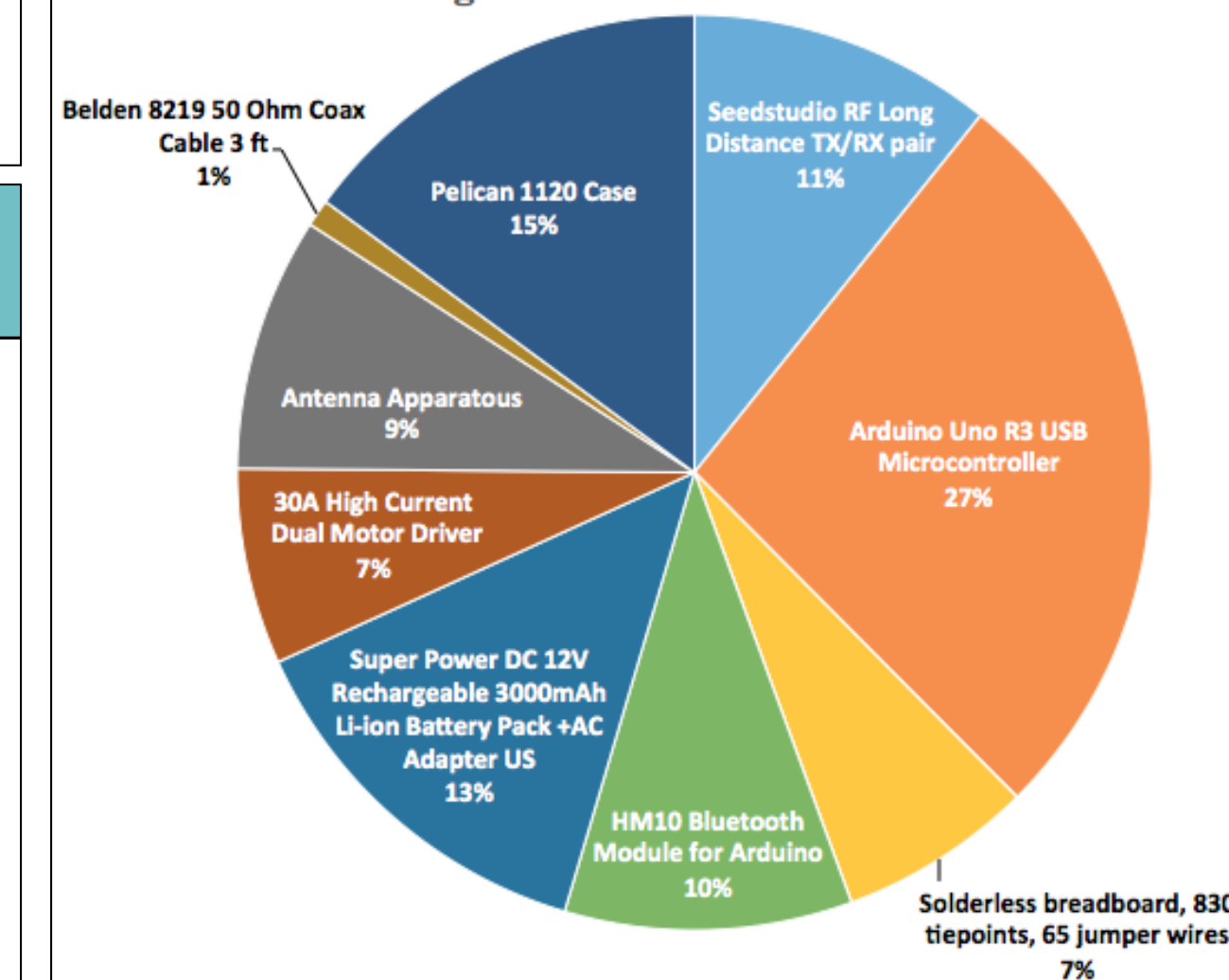
Summary

- Software
 - iOS app: fully functional and user friendly
 - Android app: semi-functional
- Electronics Range
 - Radio Frequency: 32 meters
 - Bluetooth: 65 meters
- Mechanical:
 - Improved prototype stability

Budget Results



Budget Distribution of each Element



Future Work

- Orange paint for all of the new pieces.
- Test all components in an uncontrolled maritime environment
- Optimize smartphone interface for highest possible user-friendliness. Update app to maintain compatibility with new smartphone software
- Make available on App stores

Acknowledgments

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