

With the guidance of:

- Scott Shaffar
- Barry Dorr
- Michael Hard
- Michael Lester
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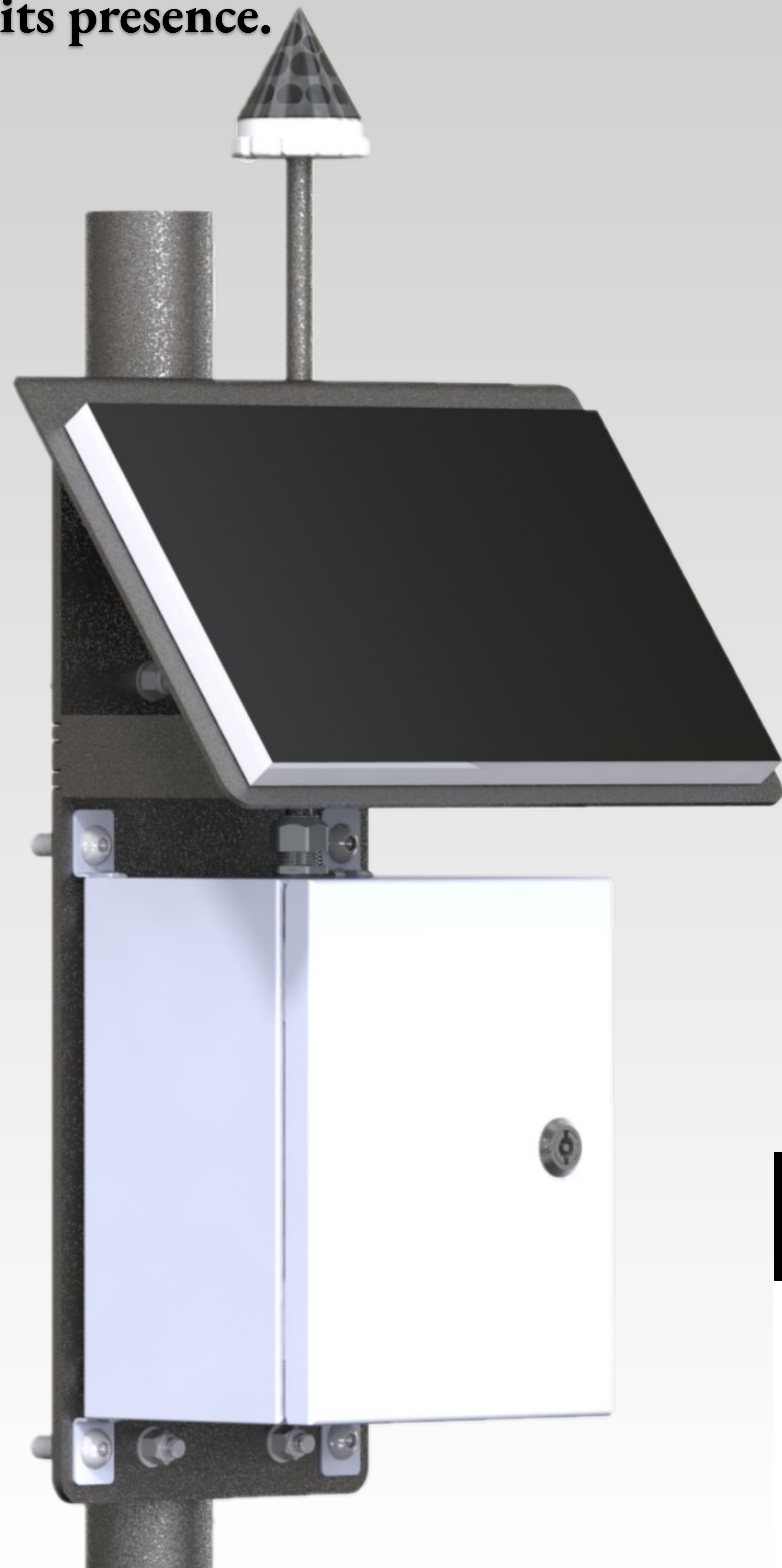
SAN DIEGO STATE UNIVERSITY



NATIONAL SECURITY INNOVATION NETWORK

Project Overview

Ellsworth Air Force Base in South Dakota outsourced a project for Drone Force One to design and manufacture. The product will detect and identify multi-rotor UAVs that enter a specified area. To achieve this we employed our knowledge and research to develop a unit which will detect and identify a nearby UAV and alert a computer interface of its presence.



Manufacturing Approach

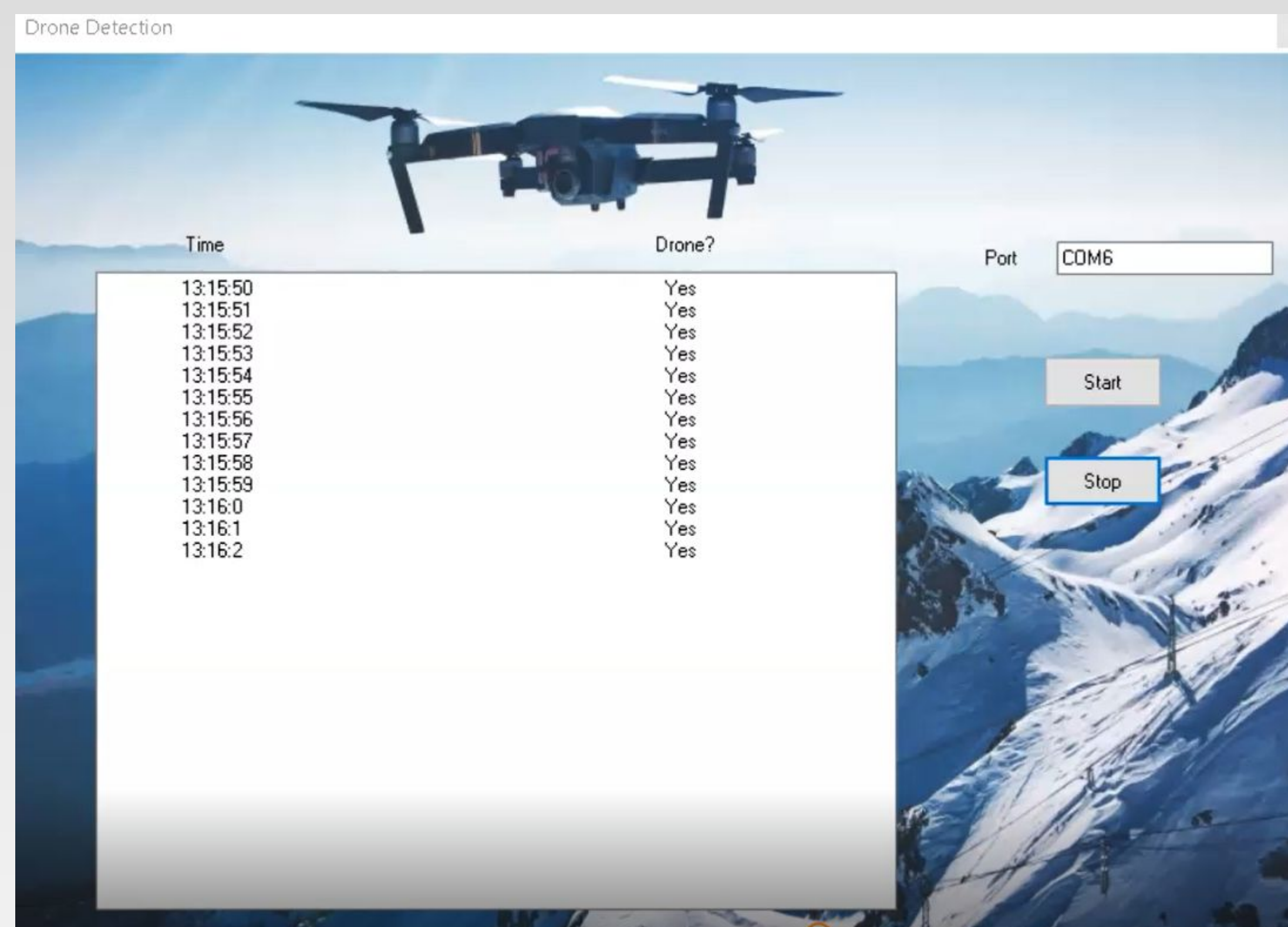
- Sheet Metal Construction
- Water-Jet & Welding
- Powder Coat Finish

Prototype Development

- Microphone Fairing
- Drone Detection Software



Detection GUI



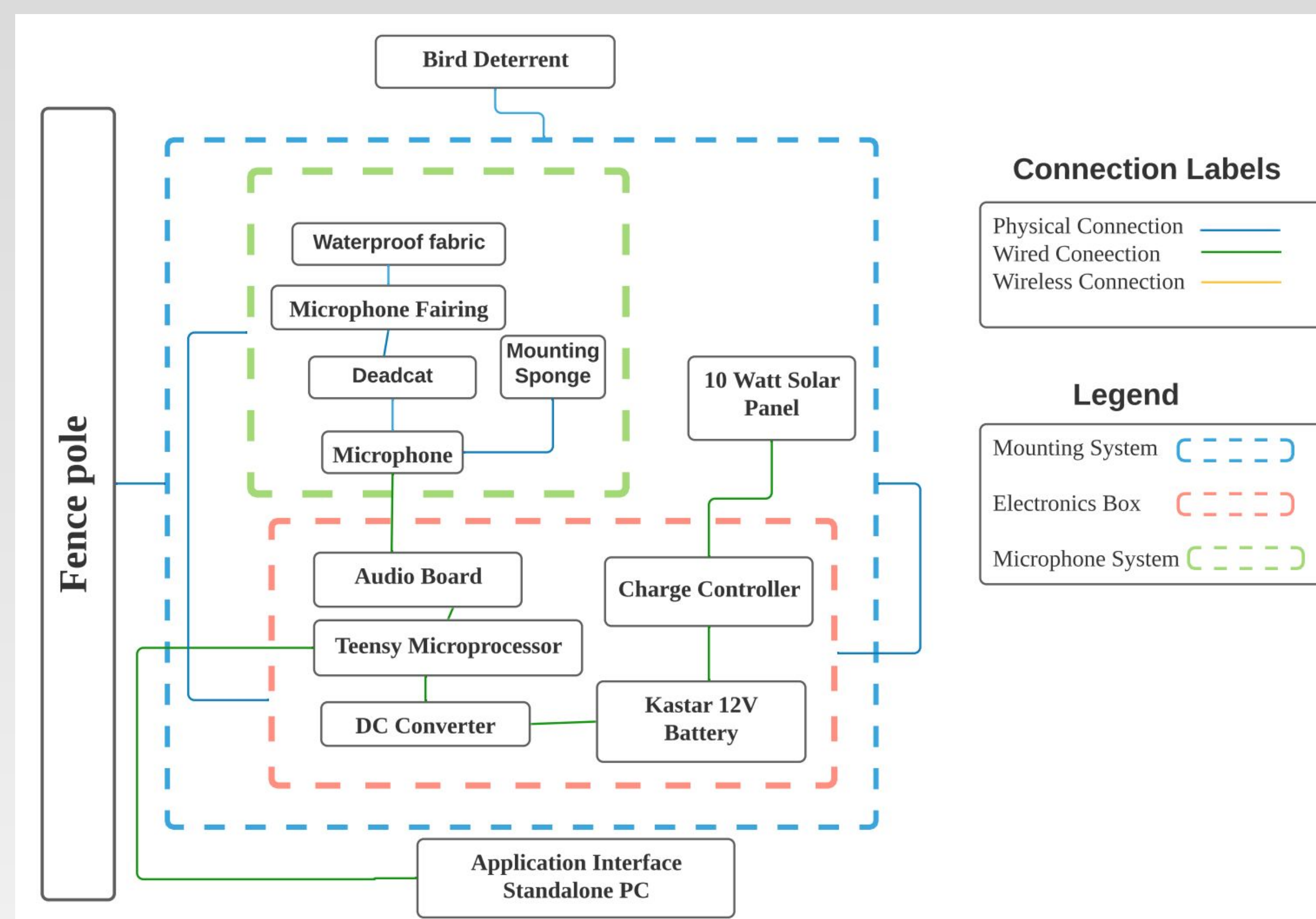
Project Requirements/Specs

- Withstand South Dakota Weather
- Tamper Resistance
- Identify Presence of a Multi-Rotor Drone

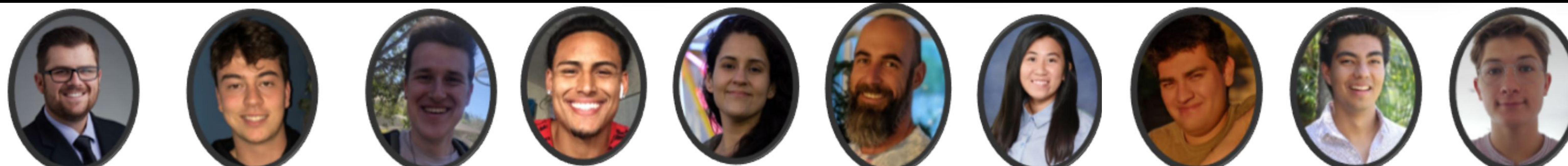
Main Components

- 10 Watt Solar Panel
- Teensy 3.6 with Audio Shield
- IP67 Electronics Box
- 3D Printed Microphone Fairing

System Level Diagram



Drone Force One Team Members



Nick Fazio Luke Larochelle Blake Downey Rominique Borja Perla Ramirez Brian Balsama Lilian Vu Arturo Urbano Christian Moreno Isaiah Pico