Team name: Six XY
Project name: Terrabox
Phase 2 Specification

Learning Objectives

Upon successful completion of Phase 2, we will have developed a fully functional prototype of our proposed product. All components and software will have been integrated and proven to be functional. We will have performed most of the necessary testing to launch the product successfully. Most of the planned functions of the project has been achieved.

Deliverables

Software
1. Front End/UI Layout
    a. Functional frontend application that can send/receive data from firebase and update values in app accordingly
    b. Optional: Add preset customization option to preset list
2. Implement Frontend and Backend for iOS app
    a. Tie User Authentication Functionality to UI and create front end views for them
    b. Create database structure for community presets and create function for reading that to be called by front end
    c. Set Database read/write permissions to secure the database
3. Connection between Raspberry Pi and Firebase
    a. Add additional parameters needed to accommodate additional sensors/readings we want to communicate
    b. Save time control function related parameters in Firebase to control sensors through app, Firebase, Raspberry Pi to STM.
4. Raspberry Pi code
    a. Ensure functionality of time-based watering and lighting cycles commands
    b. Deliver real time control signals to STM to control the sensors
    c. Implement Water level data transmission
5. Embedded Level STM Code
    a. Verify functionality of new water-level sensors
    b. Finalize control code for all sensors/actuators/communications

Hardware
1. Verify functionality of new water-level sensors
2. Mount components to box and have most of it built
3. Label and sort all wirings

Plan for Phase 3

Phase 3
- Eliminate all bugs, polish housing for hardware for finalized prototype, create edge case tests and user tests for app to discover any issues, reach out for fundraising.
- Complete all necessary documentation including project report/user manual for our product.