Flight Control App for Agribotix

*Note this student proposed project has been withdrawn and is now inactive.

Sponsor: Tom McKinnon, Agribotix CTO

Project Description

Agribotix is a company that develops drone technology to form agricultural intelligence. Their cloud based data processing and analytics platform for agricultural dones called FarmLens™ develops a field health report that allows farmers to see where their plants are thriving and where they are not in one aerial image. One of the uses of this technology is to give farmers the information that allows them to apply pesticides more precisely and thus lower both cost and environmental impact. There are a range of different drone flight control apps available but each lacks something key to Agribotix. Right now they are using the app called Map Pilot. The problem with Map Pilot is that the UI/UX is less than ideal; it is overly complicated and cluttered. It also does not allow for calibration of light exposure for the drone's camera. Other flight control apps like Drone Deploy or Precision Hawk either lack cached maps for offline use or do not support multiple battery missions. As of now there is is no single drone flight control app that satisfies all the needs for Agribotix.

Solution

A drone flight control app that has all the essential elements Agribotix is looking for. It needs to have similar mapping capabilities as Map Pilot but with a simpler, more user friendly UI/UX. Key features also include calibration for the drone camera's light exposure, cached maps for offline use and multiple battery mission capability.

Goals

Develop a complete iOS drone flight application that is good looking and easy to use. Our main goal is to get to have similar capabilities as Map Pilot but with a better design. Important features include cached mapping, video streaming and multiple battery mission capability.

Stretch Goals

Whatever time we have left after finishing our main goal will be spent adding the additional feature that allows a user to calibrate the light exposure of the camera.

Challenges

The challenges we face include understanding the user and his or her needs in order to cater the app to him or her. We also have to develop from scratch whatever drone flight code is not open source, which presents its own challenges.

Deliverables

A working iOS application that Agribotix is happy with and able to deploy right away. In exchange for sponsorship, Agribotix would have a royalty-free license to use this project and brand their version of it. We the developers would, however, be free to sell our own version of it on the App Store or release it as open source.