EE/CprE/SE 491 WEEKLY REPORT 1 - 9/17-9/23

AR Enabled Ground State - sdmay18-33

Client &/Advisor:

- Point of contact: Radek Kornicki (radek@uavx.com)
- Faculty advisor: Diane Rover (drover@iastate.edu)

Team Members/Role:

- Ryan - Communication Lead
- Nick P - Deliverables Manager
- Jarrett - Scribe
- Ethan - Technical Documentation Lead
- Nick B - Gitlab Master
- Ridwan - Quality Control Lead

Weekly Summary

This week we got organized. We have had difficulties scheduling meetings and making sure assignments are turned in or being worked on. This week we revised our team roles and made sure that we had all assignments and tasks organized on gitlab. We met with our point of contact to discuss our first deliverables to him. We plan to set up the environment for their ground station and begin learning how to spoof drone commands to be used when we are developing code.

Past week accomplishments

- Meeting with Radek
    - Ryan set up our 2nd meetings with Radek. This was the first time he was back in the US so we could finally meet in person.
    - In this meeting we discussed in more detail the things that we need to familiarize ourselves with in order to complete the project
    - Radek had forgotten the hardware in order to set up the processor environment as well as the google glass to get familiar with
    - He did bring the Epson Moverio for us to become familiar with in order to gain a better understanding of the potentials/desires to implement with AR

- Familiarised with Epson Moverio AR environment - Ridwan
    - This AR device is an option to be used with the UAVX ground station. It runs android in a very similar fashion to a phone.
    - Though we will most likely use Google Glass for this project, this device has similar feature that all us to get more familiar with AR devices.

- Google Glass study

    - Nick B. spent time looking into programming languages available to be used with google glass. Or options are most likely either PHP or Java.
    - Ethan spent time looking into all of the UI interface on google glass. There are a lot of resources available.

- Class assignment organization - Nick P
    - We almost missed some of our first assignments because of disorganization. The end of the week we spent significant time consolidating all of our information to Git Lab and re-structuring the team.
- Communication Improvements - Ryan
    - We have been having issues communication through text, and email with our client, so we have created a slack channel that will hopefully encourage more direct and quick communication.
- Project Plan v1
    - We split up each section of the project plan v1 so we could turn it in by the end of the week.

Pending issues

- Frequent missed meetings and poor communication from Radek
- Never set meeting with faculty advisor previously

Individual contributions

Team Members	Contribution	Weekly Hours	Total Hours
Ryan Decker	Project Plan v1 Communication and planning	5	5
Nick Pelland	Week 1 Report Team Organization	5	5
Nick Behrens	Project Plan v1 Google glass study	5	5
Jarrett Betke	Project Plan v1	5	5
Ethan Sabado	Project Plan v1 Google glass UI	5	5
Ridwan Faniyi	Project Plan v1 Epson Moverio AR familiarization	5	5

Comments and extended discussion

We are still waiting on our point of contact to supply us with the required hardware discussed. We have tried to meet a few times for this exchange, but have been having issues with him not showing up to meetings and not responding to emails.

Plan for coming week

- Environment setup - Nick P. and Jarrett
    - STM32 Research
    - IMX6 Research
    - This will be the Processor we are using in the ground station and should learn more details about it so that we can setup the environment properly. Once this environment is setup, we will be able to start to write some code.
- Familiarize with Mavlink open source drone commands - Ethan and Nick B.
    - We will be using the standard open source drone communication protocol, so we have to learn how we might be able to do this from our commuter with the ground station to test code in the future.
- Drone spoofing - Ryan and Ridwan
    - Using the Mavlink commands, we need to figure out the best way (i.e. wifi or USB) to communicate with the ground station so that we don't need to be actually flying a drone every time we are testing our code.
- We will plan to meet with our faculty advisor sometime this week, as well as organize a time we meet weekly.