sdmay18-30: Intelligent low-altitude air traffic management system

Week 3 Report
September 25 - October 1

Team Members

Humaid Al Kaabi — *Software Developer*
Suhail Aldhaheri — *Communications manager*
Jun An Tan — *Software key concept holder & Report checker*
Saad Alsudayri — *Report & quality manager*

Summary of Progress this Report

We manage to improve our GPS position code to display all possible scenarios when travelling between 2 different points on the map. We are currently still writing the code on plotting the total trajectory between 2 points, where we could foresee ourselves using this code to have it work together to display current GPS position with respect to time. Also, although it is not stated as a pending issue on our last report, we also worked on the code that provides random demands located at random locations on the map. As of this moment, we made the assumption that the number of warehouse on our map is fixed.

Pending Issues

whatever that we will be testing is all in the context of using a warehouse to a demand (1 to 1). when it all works, we will then think of a way to translate it into a multiple madness scenario. We have to get our display of GPS position on our still in-progress trajectory code.

Plans for Upcoming Reporting Period

We hoped to get this trajectory part working and when it does, we will further test it by merging it with the random demands generator code done earlier.
Or we could proceed to make a function that read customer demands and initialize flight requests.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Humaid Al Kaabi	for this week I did mainly two things, First I helped in finishing the function that we developed last week, and we were able to finally have a function that calculate the location of an aircraft given the departure and destination locations with respect to the time. Second, I worked on developing two lists that we will be using to record the customer demands and flight requests. The customer demand list can store demand information such as the location, and the flight request list will be used to store the flight request and I am working on designing	10	31

	a third list that will handle the ongoing flights.		
Suhail Aldhaheri	Researched about plotting the drone on the map. We needed to come up with a plot that refreshes with time. I found examples like jfreechart that we will need to test out and see if it works properly. I also worked on the design thinking workshop along with the presentation.	5	17
Jun An Tan	Improved the previous gps position code with members for it to work in all different cases . Created a random demand generator function that simulates "new demands" over time & allocates the locations of the demands randomly. wrote another function that limits our simulation profile (x axis-limit ,y-axis-limit) created a flight request function that will eventually work together with our GPS position code	9	24
Saad Alsudayri	Researched for the libraries and functions in java that plots the updated data of the drone with respect to time. There are 3 libraries can help with plotting data. I tested them for accuracy and precision. I helped in providing examples of each function and how they work with time.	9	21