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

Week 9 Report November 20 - November 25

#### **Team Members**

Humaid Al Kaabi — Software Developer Suhail Aldhaheri — Communications manager Jun An Tan — Software key concept holder & Report checker Saad Alsudayri — Simulation of Trajectory function

## Summary of Progress this Report

For this part of the weekly report we have mostly worked on updating the final necessary details. First, we have added time slots to the ArrayLists in order to keep track of the time of order, request, and departure. Second, we created few functions in order to calculate the location of the aircrafts with respect to time. Finally, we spent some time testing the functions created in the past few weeks in order to make sure the outputs are correct. As we are still not able to find out a way to plot it in a java base GUI, we decided to modify outputs of the code that does the plotting to work in matlab as a temporary measure to present a visual for our upcoming presentation to the panels.

#### Pending Issues

For the next week will be working on updating the warehouses ArrayList in order to make it more realistic such as having limited time of aircraft. Second, we will work on making .exe file for our software and make sure it usable since the first prototype was just to make sure the code was working.

# Plans for Upcoming Reporting Period

Continue to troubleshoot and find out the "how" factor in doing the plot in java. Prepare, conclude and improve on our final version of project plan, design document and the preparation for the presentation of work.

#### **Individual Contributions**

Team Member	Contribution	Weekly Hours	Total Hours
Humaid Al Kaabi	In this period I worked on different things. First, I updated most of the classes in order to have slots in order to store time. Second, I created three functions to help deal with time and position. The first function is to calculate the difference in time, second function is to calculate new time by adding seconds to a Date variable, and the last one is to calculate the real time position of the drone. Finally, I created a function to keep track of the ongoing flight list and update it.	10	86
Suhail Aldhaheri	I did more work on the simulation I did in the	6	62

	last few weeks. I fixed the for loop so that whenever an aircraft reaches a warehouse, it will delete itself along with the path. I also fixed the flickering that used to happen with the plots and made it look better. I made the warehouse look more presentable. I looked over the java code to see how I can use my matlab code in the java code. I'll have to figure out how to get the information from the ongoingflight function in java and use it in the matlab.		
Jun An Tan	I did some "trial and error" on creating a java GUI with hopes to incorporate our back-end codes but unfortunately i have yet to be successful in debugging "whats wrong"	7	70
Saad Alsudayri	for this week: I spent sometime revising our project design and compare it with the one we submitted in the 8th week and revise it. I also found a program that can work in eclipse to show the world's map and plot the longitude and latitude (location). the problems in this program is that it is that accurate to show the location and the bounties of countries and states is not clear nor visible.	7	73