CS407 Group Report

A framework for autonomous drone networks

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Summer 2016

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CHAPTER 1. Opening

1.1 Key Words

Autonomous Drones, Sensor Networks, Network Simulation, Pathfinding, Physical Routing, Communications Routing

1.2 Word Count

The document contains 30,000 words. This number was calculated from the document source by TeXstudio.

1.3 Acknowledgements

We would like to thank our project supervisor Arshad Jhumka for guiding us and giving us advice on available technologies, methods and tools for wireless sensor network implementation, and for his continued support, even when we decided to change the foundational software basis of our project. Finally, we would also like to thank him for his critique during meetings and the poster presentation on our implementation of routing and research into the field.

1.4 Introduction

This report will provide a comprehensive analysis of the project undertaken by our group on the subject of autonomous drones in sensor networks. There will be a background summary of the key components in this field, as well as a discussion of the ongoing research, development and production being carried out. We will supply an analysis of the potential problems for which a solution

can be found in drone networks, and a justification for the resulting aims and objectives of our group. The report will detail the design, implementation and testing of the solution, including considerations for the management of the project. Finally, the project outcome will be evaluated, followed by a conclusion reflecting on the success of the project and considerations for future works.

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