**Interim report of**

**Design of Efficient Mobile Edge Computing in Wireless Network**

***by***

**LI KIN TAK, *Student No: D-B4-2640-6***

Project Supervisor

Prof. Yuan Wu

### CHAPTER 1. Abstract

### In this project, based on the multi-task multi-server scenario, each task is assigned to a different server. First, the EM-I algorithm is designed to optimize the amount of mobile user transmission tasks and the time for nonorthogonal multiple access transmission to calculate the user completion under a fixed distribution scheme. Minimum energy consumption for all tasks. Then use the simulated annealing algorithm to find the best matching solution to minimize the overall energy consumption, and finally design a corresponding interface to display the algorithm results.

### CHAPTER 2. Expected deliverable & SCHEDULE

|  |  |  |
| --- | --- | --- |
| Objective | Deliverable Content | Schedule |
| Background & Modeling | 1. Power model for users to send tasks to edge servers based on nonorthogonal multiple access. | 19/09/10~  19/10/29 |
| Solve the model &  Algorithm simulation | 1. Simulation program of Minimize the energy consumption (EEO-E) for given peering scheme by using two layers algorithm called “EEO-Top” and “EEO-Bot”. 2. Simulation program of using Simulated Annealing Algorithm to solve the peering problem between tasks and servers. | 19/10/29~  20/04/01 |
| Visualization | 1. The interface to customize parameter of algorithm. 2. The result visualization figures 3. The interface to show the entire algorithm process. | 20/04/01~  20/04/25 |
| Summary & Report | 1. Summary of the work. 2. The report of entire project 3. Video of presentation 4. Revised report and poster. | 20/04/25~  20/06/05 |

### CHAPTER 3. Member contribution

This project is completed by me alone under the guidance of Professor Wu.

### CHAPTER 4. Conclusion and future plan

In the process of constantly solving difficulties, most of the work of this project has been completed, and the remaining time will be concentrated on the completion report and presentation video.