**Research Proposal Form**

**Student Name: Huynh Van Qui** **Student Number**:GCC210153

**Tutor**: Tran Thi Kim Khanh **Date**: <Deadline of ASM1/ASM1 retake>

**Unit 13:** Computing Research Project

**Propose Title:** Upgrade delivery drone by using Big Data, Terrestrial laser scanning, and scan-to-BIM

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| **Section One: Title, objective, responsibilities** |
| Research Question:  What are the benefits and challenges of integrating terrestrial laser scanning and scan-to-BIM methods for creating 3D models of delivery drone landing sites and routes?  How can Big Data help drones to decrease risks related to weather and security?  How can terrestrial laser scanning and scan-to-BIM help drones identify the floor number of buildings?  **Objectives:**  I want to learn:   * What is terrestrial laser scanning? * How can terrestrial laser scanning estimate the height of floors of the building? * How does terrestrial laser scanning help drones identify building floors? * What is scan-to-BIM technology? * How can combine terrestrial laser scanning and scan-to-BIM? * How can drones avoid bad weather like rainstorms using Big Data? |
| **Section Two: Reasons for choosing this research project** |
| Reasons for choosing the project   * • Currently, delivery service is more popular and I want to expand this service with a different approach, so I decided to choose this project to research. * I want to find a new solution for delivery drones to make it more efficient * I want to learn a new field as laser scanning and scan-to-BIM * I want to bring this project to life to make deliveries faster, more accurate and more convenient |
| **Section Three: Literature sources searched** |
| The initial sources which could help me to answer those questions: (at least 5 articles) |
| **Section Four: Activities and timescales** |
| Section Four: Activities and timescales  1. Collect materials relating to research's question and objectives  2. Complete research proposal  3. Milestone 1[14/11]: Get feedback from the Tutor about the research proposal  4. Produce project plan  5. Writing literature review and represent the findings in term of hypothesizes  6. Check project progress: research proposal, plan, literature review  7. Preparation for primary research (to confirm the findings in literature review or clarify the questions might arise after the literature review)  8. Milestone 2[30-11]: Get feedback from the Tutor about the plan of primary research.  9. Milestone 3(2-11]: Get feedback from the Tutor about the result of literature  review  10. Conducting the primary research  11. Milestone 4[5-12]: Represent the findings in primary research and get feedback from Tutor  12. Writing assignment 1 which contains LO1, LO2  13. Milestone 5[7-12]: Submit assignment 1 -Draft  14. Milestone 6[10-12]: Submit assignment 1- Final |
| **Section Five: Research approach and methodologies** |
| * Research process: Sequential * Research classes: qualitative and quantitative * Research methods: Survey |
| **Comments and agreement from tutor** |
| Comments (optional):  I confirm that the project is not work which has been or will be submitted for another qualification and is appropriate.  Agreed: .................................................................................... (Name) ............................................................. (Date) |
| **Comments and agreement from project proposal checker (if applicable)** |
| Comments (optional):  I confirm that the project is appropriate.  Agreed: .................................................................................... (Name) .................................................................................... (Date) ...................................................... |