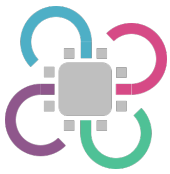

List of Deliverables

Computing Platform Multirotor with FPGA Acceleration

STUDENT TEAM

CPEN/ELEC 491 Capstone Team 109

Deutsch, Peter	*me@peterdeutsch.ca*
He, Muchen	*m.he@alumni.ubc.ca*
Hsueh, Arthur	*ah11962@outlook.com*
Wang, Meng	*wzfftxwd@gmail.com*
Wilson, Ardell	*ardellw96@gmail.com*

CLIENT

Dr. Mieszko Lis

Electrical and Computer Engineering, The University of British Columbia

Revision 1.2 — April 8, 2020

THE UNIVERSITY OF BRITISH COLUMBIA

Electrical and Computer Engineering

Revision History

The full revision history and commited changes of the document can be found in the git repository history: https://github.com/Capstone-Skynet/Capstone-Skynet.github.io/commits/master.

Version #	Initials	Release Date	Changeset	Changes Made
0.0	PD	2019-10-11	`660e001`	Initial skeleton of the document.
0.1	MH	2019-10-11	`6af9e8a`	Populate initial document with draft content required for Milestone I.
1.0	PD	2019-11-23		Updated header to synchronize styles for Milestone II.
1.1	PD	2020-04-06		Updated physical computation platform deliverables.
1.2	PD	2020-04-08		Updated delivery instructions.

Contents

Terms and Abbreviations

No new terms are utilized in this document.

1 About This Document

This document outlines the full list of deliverables presented to the client at the end of the project (in addition to how they are to be delivered).

2 List of Deliverables

2.1 Hardware Artifacts

2.1.1 Computing Platform Artifacts

- 1 – Raspberry Pi 4
- 1 – Micro-SD Card (for Raspberry Pi)
- 1 – Raspberry Pi Camera Module (5 MP)
- 1 – USB-C to Mains Adapter
- 1 – Ethernet Cord (10 ft)
- 1 – Zedboard
- 1 – SD Card (for Zedboard)
- 1 – 12V Barrel Plug to Mains Adapter
- 2 – Micro-USB to USB-A Cable

2.1.2 Multirotor Artifacts

The following list of items are already assembled into a single entity upon delivery.

- 1 – JMT 560 mm Carbon Fibre Frame
- 1 – ArduPilotMega Autopilot Flight Controller with GPS and Barometer sensors
- 1 – RadioLink Receiver
- 4 – Unnamed 3508 700 kV Brushless DC Motor
- 4 – HobbyZone 40.0 A Electric Speed Controller
- Custom-Made Mechanical Parts (see CAD drawings document)

The following list of accessories are essential to configure the multirotor for flight.

- 1 – 3S 5000 mAh Lithium Polymer Battery with XT-60 Connector
- 1 – AC to DC 3S Battery Charger
- 1 – RadioLink Transmiter
- 8 – AA Alkaline Batteries for the Transmitter

2.2 Document Artifacts[1]

- Requirements Specification

[1] All referenced documents can be found at https://github.com/Capstone-Skynet/Capstone-Skynet.github.io

- Design Specification
- CAD Drawings
- Validation Specification and Results
- Operations, Maintenance, and Upgrades Specifications
- List of Deliverables

2.3 Other Artifacts

- Demonstrative Video
- Oral Presentation
- Project Repositories
  - Documents and Meeting Notes Repository (https://github.com/Capstone-Skynet/Capstone-Skynet.github.io)
  - Source Code Repository (https://github.com/Capstone-Skynet/Integration)
  - CAD models of hardware and mechanical components

3 Equipment Delivery

To conform with the physical distancing requirements imposed in light of the COVID-19 pandemic, the delivery of equipment listed in Section 2 to Dr. Lis will be delayed until Summer 2020.

If physical distancing measures are relaxed prior to September 1st, 2020, Peter Deutsch (me@peterdeutsch.ca) will hand-deliver the components to Dr. Lis (mieszko@ece.ubc.ca) at an agreed upon date. Otherwise, he will deposit the items in a secure location (Kaiser Building Room 4025) for the client to pick up at a later time.

The estimated value of the equipment being delivered is $1100.