Vehicle Intersection Control

MCMASTER UNIVERSITY

Proof of Concept Demonstration

SE 4G06

GROUP 6

Alex Jackson
Jean Lucas Ferreira
Justin Kapinski
Mathew Hobers
Radhika Sharma
Zachary Bazen

Contents

1 Revisions 3

2 Challenges 4
- 2.1 Lane Following . . . 4
- 2.2 Car to Controller Communication . . . 4
- 2.3 Overall Power Supply . . . 4
- 2.4 How far the car as traveled . . . 4
- 2.5 Obstacle Detection . . . 4

3 Software Challenges 4
- 3.1 Processing speed . . . 4

4 Open Issues 4
- 4.1 Intersection Computer and Micro controller . . . 4

5 Some Assumptions 4

List of Tables

1 VIC Table of Revisions . . . 3

List of Figures

1 Revisions

Date	Revision Number	Authors	Comments
December 1, 2016	Revision 0	Alex Jackson Jean Lucas Ferreira Justin Kapinski Mathew Hobers Radhika Sharma Zachary Bazen	N/A

Table 1: VIC Table of Revisions

2 Challenges

2.1 Lane Following

- Use existing software or make own
- look at previous examples to build own algorithm

2.2 Car to Controller Communication

- Assuming already paired before demo

2.3 Overall Power Supply

- More batteries for everything

2.4 How far the car as traveled

- necessary to know speed of the motor to get control over the engine
- start car at know spot and then use hallo effect senor to measure wheel rotation to get the distance

2.5 Obstacle Detection

- how do we ensure that we don't detect something in the next lane

3 Software Challenges

3.1 Processing speed

- can't write in python
- see how other ppl did this

4 Open Issues

4.1 Intersection Computer and Micro controller

- programming languages
- how will the sensors info be relayed into algorithms
- processing time –> maybe make the car go slower

5 Some Assumptions

- Define obstacle in assumptions
- its going to be x big
- another car
- block