



# Vehicle Intersection Control

McMASTER UNIVERSITY

Draft System Requirements

SE 4G06

GROUP 6

Alex Jackson  
Jean Lucas Ferreira  
Justin Kapinski  
Matthew Hober  
Radhika Sharma  
Zachary Bazen

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## Revisions

Date	Revision Number	Authors	Comments
November 7, 2016	Revision 0	Alex Jackson Jean Lucas Ferreira Justin Kapinski Matthew Hober Radhika Sharma Zachary Bazen	N/A

Table 1: VIC Table of Revisions

**\*\*\* These headings to be double checked against template to ensure no topics missed \*\*\***

## 1 Project Drivers

### 1.1 The Purpose of the Project

The purpose of this project is to allow autonomous cars to identify and navigate intersections by providing an appropriate order to proceed through the intersection. Currently multiple autonomous cars arriving at an intersection at the same time have no decision protocol that will determine which car proceeds first through the intersection. **{{(From project goals)** VIC will allow autonomous vehicles to identify intersections and form a unanimous consensus of the order in which vehicles should proceed through an intersection. In addition, VIC will be able to dynamically handle changing scenarios at an intersection without running into deadlock or stalemate situations. To ensure safety, VIC will allow cars to navigate through the intersection only after a unanimous consensus has been made. }

### 1.2 The Client, the Customer, and Other Stakeholders

#### 1.2.1 Client

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#### 1.2.2 Customer

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#### 1.2.3 Stakeholders

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### 1.3 Users of the Product

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## 2 Project Constraints

### 2.1 Mandated Constraints

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### 2.2 Naming Conventions and Definitions

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### 2.3 Relevant Facts and Assumptions

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## 3 Functional Requirements

This section is taken from IEEE

**TRK-1:** Track Requirement 1

**TRK-1:** Track Requirement 2

**VHL-1:** Requirement 1

**VHL-1:** Requirement 2

**ITC-1:** Controller Requirement 1

**ITC-1:** Controller Requirement 2

## 4 Nonfunctional Requirements

### 4.1 Look and Feel Requirements

#### 4.1.1 Appearance Requirements

Insert Text Here.

**4.1.2 Style Requirements**

Insert Text Here.

**4.2 Usability and Humanity Requirements****4.2.1 Ease of Use Requirements**

Insert Text Here.

**4.2.2 Personalization and Internationalization Requirements**

Insert Text Here.

**4.2.3 Learning Requirements**

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**4.2.4 Understandability and Politeness Requirements**

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**4.2.5 Accessibility Requirements**

Insert Text Here.

**4.3 Performance Requirements****4.3.1 Speed Requirements**

Insert Text Here.

**4.3.2 Safety-Critical Requirements**

Insert Text Here.

**4.4 Precision Requirements**

Insert Text Here.

**4.4.1 Reliability or Availability Requirements**

Insert Text Here.

**4.4.2 Robustness or Fault-Tolerance Requirements**

Insert Text Here.

**4.4.3 Capacity Requirements**

Insert Text Here.

**4.4.4 Scalability or Extensibility Requirements**

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**4.4.5 Longevity Requirements**

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**4.5 Operational and Environmental Requirements****4.5.1 Expected Physical Environment**

Insert Text Here.

**4.5.2 Requirements for Interacting with Adjacent Systems**

Insert Text Here.

**4.5.3 Production Requirements**

Insert Text Here.

**4.5.4 Release Requirements**

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**4.6 Maintainability and Support Requirements****4.6.1 Maintenance Requirements**

Insert Text Here.

**4.6.2 Supportability Requirements**

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**4.6.3 Adaptability Requirements**

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**4.7 Security Requirements****4.7.1 Access Requirements**

Insert Text Here.

**4.7.2 Integrity Requirements**

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### **4.7.3 Privacy Requirements**

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### **4.7.4 Audit Requirements**

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### **4.7.5 Immunity Requirements**

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## **4.8 Cultural and Political Requirements**

### **4.8.1 Cultural Requirements**

Insert Text Here.

### **4.8.2 Political Requirements**

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## **4.9 Legal Requirements**

### **4.9.1 Compliance Requirements**

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### **4.9.2 Standards Requirements**

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## **5 Project Issues**

### **5.1 Open Issues**

Insert Text Here.

### **5.2 Off-the-Shelf Solutions**

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### **5.3 New Problems**

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### **5.4 Migration to the New Product**

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### **5.5 Risks**

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### **5.6 Costs**

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### **5.7 User Documentation and Training**

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### **5.8 Waiting Room**

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