# Tesseract Project Revisit: Specification and Requirements MSE 3302 B

Alan Harris 250911270

Robert Potra 250914807 Andrew Randell 250891074

Kevin Wang 250891074

January 14, 2019

## Contents

L	Design Specifications and Requirements		
	1.1	Perform	mance and Constraints
		1.1.1	Required Speed
		1.1.2	Required Acceleration
		1.1.3	Required Accuracy and Resolution
		1.1.4	Allowable Overshoot
		1.1.5	Power Rating and Voltage Rating for Power Supply
		1.1.6	Overall Dimensions
		1.1.7	Operating Forces and Torques
		1.1.8	Mass and Inertia of Components in Motion
		1.1.9	Structural Frame Rigidity
		1.1.10	Expected Temperature Range
			Expected Cleanliness
		1.1.12	Safety Features
2	$\mathbf{Mil}$	estones	s and Timeline
	2.1	Projec	t Timeline

## 1 Design Specifications and Requirements

#### 1.1 Performance and Constraints

- 1.1.1 Required Speed
- 1.1.2 Required Acceleration
- 1.1.3 Required Accuracy and Resolution
- 1.1.4 Allowable Overshoot
- 1.1.5 Power Rating and Voltage Rating for Power Supply
- 1.1.6 Overall Dimensions
- 1.1.7 Operating Forces and Torques
- 1.1.8 Mass and Inertia of Components in Motion
- 1.1.9 Structural Frame Rigidity
- 1.1.10 Expected Temperature Range
- 1.1.11 Expected Cleanliness
- 1.1.12 Safety Features

#### 2 Milestones and Timeline

### 2.1 Project Timeline

```
Week of:
           Specifications and Requirement Deliverable
Jan. 14 •
Jan. 21
Jan. 28
Feb. 04
Feb. 11
          Preliminary Sensor Selection Deliverable
Feb. 18
Feb. 25
Mar. 04 \blacklozenge
Mar. 11 ♦
          Preliminary Actuator Selection Deliverable
Mar. 18 •
Mar. 25 •
Apr. 01 ♦ Project Complete
```