**RoboWars**

**Final Report**

**Draft #1**

**SYSC 4907  
April 7th, 2011  
Project #34  
  
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# 1 – Introduction (Alex Craig)

* Introduce problem area
* Problem motivation (goals)
* Problem statement
* Proposed solution
* Accomplishments
* Report overview

# 2 - The Engineering Project (Steve Legere)

## 2.1 Health and Safety

* Not terribly relevant

## 2.2 Engineering Professionalism

## 2.3 Project Management

* Phased incremental lifecycle
* Heavy emphasis on design work before beginning implementation
* Three stages of development with time scheduled for testing for each phase
* Discuss and reference Gantt chart

## 2.4 Individual Contributions

### 2.4.1 Project Contributions

### 2.4.2 Report Contributions

# 3 – Background and Terminology

## 3.1 – Android Operating System (Steve Legere)

## 3.2 – LEGO Mindstorm NXT 2.0 (Mike Wright)

## 3.3 – Augmented Reality (Alex Dinardo)

# 4 – Overall System Architecture (Alex Craig)

# 5 – Server Implementation

## 5.1 – User and Robot State Management and Data Propagation (Alex Craig)

## 5.2 – Live Media Streaming (Alex Craig)

## 5.3 – Virtual World Model Implementation (Alex Dinardo)

# 6 – Robot Client Implementation

## 6.1 – LeJOS and Modifications (Mike Wright)

## 6.2 – Dead Reckoning and Dot-Grid Error Correction (Mike Wright)

# 7 – Android Client Implementation

## 7.1 – OpenGL Rendering (Steve Legere)

# 8 – Testing

## 8.1 – Server Side Testing (Alex Dinardo)

### 8.1.3 – Unit Testing (Alex Dinardo)

### 8.1.4 – Integration Testing (Alex Dinardo)

## 8.2 – Robot Client Testing (Mike Wright)

## 8.3 – Android Client Testing (Steve Legere)

# 9 – Conclusion (Mike Wright)

# Appendix A – Use Cases

# Appendix B – Use Case Realizations (Sequence Diagrams)

# Appendix C – Schedule Gantt Chart

# Appendix D – Class Diagrams