VERSION HISTORY

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| **Title** | Systems Document | | | |
| **Description** | Week 1 iteration of this document | | | |
| **Created By** | Luka Jurisic, Documentation Manager | | | |
| **Date Created** | 19th February 2018 | | | |
| **Maintained By** | Luka Jurisic | | | |
| **Version Number** | **Modified By** | **Modifications Made** | **Date Modified** | **Status** |
| 1.00 | Luka Jurisic | Created the document. Set out the overall structure that the document should follow | 19th February | Initial work done |
| 1.01 | Luka Jurisic | Completed section 1.0. | 20nd February | All other sections remain. Section 1.0 complete but needs sketches |

**SYSTEMS**

**1. SYSTEM MODEL**

*Localization:* Initially, the robot will be placed at any point, in any orientation, within it’s designated zone. The robot must be able to localize itself and traverse to the starting point before it begins its mission to steal the enemy flag.

*Navigation:* The robot must be able to navigate through both the bridge and tunnel obstacles without crashing or falling off into the water. In the remote chance of having a possible collision with the enemy robot, it must be able to avoid this as well.

*Object Detection:* The robot will be able to detect the presence of the enemy flag through its distinct colour. Hence, it must be able to differentiate between different colors within its surrounding.

*Flag Capture*. Once detecting the presence of the flag, it must be able to capture it by effectively utilizing the hardware components that make up its design.

*Flag Delivery*: The robot must be able to traverse through one of the obstacles again and return the captured flag to its zone.

**2. HARDWARE AVAILABLE AND CAPABILITIES**

**3. SOFTWARE AVAILABLE AND CAPABILITIES**

**4. COMPATABILITY**

**5.0 REUSABILITY**

**6. STRUCTURES**

**7. METHODOLOGIES**

**8.0 TOOLS**