Memo

**To**: Dr. Luis Rodriguez

**From**: A.R.C. - Logan Beaver, Justin Campbell, Tyler Paddock, and Ron Shipman

**Date**: September 26, 2014

**Re**: A.R.C.’s Update for the Week 3

**Problem Statement:**

Milwaukee School of Engineering’s mechanical engineering students take controls classes in their senior year. Having an automated control system would be a beneficial tool to explore controls theory. An application of Automatic Control Systems is the use and development of robotics. Development of a robot with pneumatic locomotion for the Milwaukee School of Engineering’s controls classes would give students a first-hand experience with complex control systems.

**Last Week’s Goals:**

* Create memo
* Synthesize initial constraints
* Brainstorm funding
* Literature review
* Research on microcontroller/pneumatic interface, gait research, pneumatic circuit research,

**Accomplishments:**

* All goals were accomplished
* Acquired free pneumatic circuit development software

**Goals for this Week:**

* Request funds from Plexus, JoyGlobal, Johnson Controls, and MSOE
* Deliver initial constraints to Dr. Mahinfalah at next senior design meeting
* Design an initial pneumatic circuit for a 4 legged robot
* Create a rough matlab model for a 2 link pneumatic leg
* Interface an xBox controller with matlab
* Audit robot parts list

**Project Difficulties:**

* Project is currently self-funded

**Activities:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Date** | **Person** | **Task** | **Time [Hours]** | **Total Man-Hours** |
| 9/19/14 | Team | Team Meeting | 1 | 31 |
| 9/25/14 | Team | Team Meeting | 1 |
| 9/19/14 – 9/25/14 | Team | Various Research | 3 |
| 9/19/14 | Justin, Ron, Tyler | Constraint meeting | 3 |
| 9/23/14 | Logan, Tyler | Review constraints, discuss modelling | 1 |