

**Weekly Report (WEEK 6)**

**Company Name:** OJO **10/11/2017**

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**Introduction**

This week we had two meetings with our group. In the meetings we chose the project, discussed about the proposal report and the standards of the standards committee. Also we discussed about the alternative solutions to the problems and the components we need to buy to test the solutions we discussed. This document contains the details of the discussion made in the meetings.

The project we are pursuing is platoon (convoy).

**Project choice**

We did pairwise comparison of 5 different projects on 4 criteria. 0 means no difference, 3 means major difference. The comparison table is below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Electronics**  **Image**  **Processing** | Convoy | See-saw | Basketball | Maze | Obstacle |
| Convoy |  | Convoy, 3 | Convoy, 2 | Convoy, 2 | Convoy, 3 |
| See-saw | Convoy, 3 |  | See-saw, 1 | 0 | Obstacle, 2 |
| Basketball | Basketball, 2 | Basketball, 3 |  | Maze, 1 | Obstacle, 2 |
| Maze | Convoy, 1 | Maze, 3 | Basketball, 1 |  | Obstacle, 1 |
| Obstacle | Convoy, 1 | Obstacle, 3 | Basketball, 2 | Maze, 3 |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Fun**  **Robotics­­** | Convoy | See-saw | Basketball | Maze | Obstacle |
| Convoy |  | Convoy, 2 | Basketball, 2 | Convoy, 3 | Convoy, 2 |
| See-saw | See-saw, 1 |  | Basketball, 2 | Maze, 2 | 0 |
| Basketball | Basketball, 2 | Basketball, 1 |  | Basketball, 3 | Basketball, 1 |
| Maze | Convoy, 2 | 0 | Basketball, 1 |  | Obstacle, 2 |
| Obstacle | Obstacle, 2 | Obstacle, 1 | 0 | Obstacle, 3 |  |

Table 1. Comparison table

**Convoy: 24**, See-saw: 2, Basketball: 20, Maze: 9, Obstacle: 14

The convoy project appeared the most suitable one for our group, hence we chose it.

**Proposal Report**

Proposal report is one of the essential report for the project. We arranged a meeting to write the report. We worked together had brainstorm on the parts like problem statement, solutions etc.

**Standards Committee**

We discussed about the standards to be set and discussed in the standards committee meeting for the robot. We divided the standards in three categories, as follows,

* **Physical Standards:** These are related to physique of the robot such as the dimension of the robot (more specifically the height). Also the speed of the robot should be considered as a standard while the robot is moving and leaving. There should also be a standard distance between two robots.
* Flags for leaving, last robot.
* **Visibility Markers:** There must be a visibility marker on every robot in the platoon, so that the robot behind any robot is able to identify the front robot(the robot in the platoon).

**Main Solution and the Alternative Solutions**

* **Visibility and distance measurement.**
  + Using 4 LEDs
  + Sound signal
* **Flags**
  + Visibility Marker
  + Leaving robot
  + Last Robot

**Components to be bought**

* Raspberry Pi
* Arduino
* 4 infrared LEDS
* Solar panels
* USB camera