



October 29 - November 05 Weekly Report

1 Progress

- [Team] Criteria for pairwise comparison table are determined by giving weight to each criterion. The table is used to choose the most suitable project among the four projects. The resultant table is Figure 1.
- [Team] The project to be realized is determined according to the criteria listed in pairwise comparison table. The chosen project is "Chasing Cars in an Elliptic Path". The results are presented in Figure 2. Points are as follows:
 - Balloon Catching: 5.28
 - Air Hockey: 5.84
 - Chasing Car: 7.48
 - Mapping: 4.04

	Having Fun	Competition	Original Solution	Budget	Mechanical Challenges	Complexity	Marketability	Total	Weighted Objectives
Having Fun	0	0,5	0,75	0,8	0,9	0,6	0,8	4,35	0,2
Competition	0,5	0	0,7	0,7	0,5	0,75	0,8	3,95	0,2
Original Solution	0,25	0,3	0	0,6	0,7	0,55	0,8	3,2	0,16
Budget	0,2	0,3	0,4	0	0,2	0,3	0,8	2,2	0,1
Mechanical Challenges	0,1	0,3	0,3	0,8	0	0,3	0,8	2,6	0,12
Complexity	0,4	0,25	0,45	0,7	0,7	0	0,8	3,3	0,16
Marketability	0,2	0,2	0,2	0,2	0,2	0,2	0	1,2	0,06
								20,8	1

Figure 1: Objective Tree.

	Having Fun (0.2)	Competition (0.2)	Original Solution (0.16)	Budget (0.1)	Mechanical Challenges (0.12)	Complexity (0.16)	Marketability (0.06)	Total
Balloon	8	10	6	4	0	2	6	5,28
Air Hockey	1,6	2	0,96	0,4	0	0,32	0,36	5,84
Chasing Cars	8	8	4	8	2	6	8	7,48
Mapping	1,6	1,6	0,64	0,8	0,24	0,96	0,48	4,04
	10	8	8	6	6	8	10	
	2	1,6	1,28	0,6	0,72	1,28	0,6	
	4	4	8	2	8	0	6	
	0,8	0,8	1,28	0,2	0,96	0	0,36	

Figure 2: Project Evaluation.



- [Team] Progressed in proposal report. Systems and sub-systems (see Figure 3) of the project are determined along with the project requirements (see Figure 3).

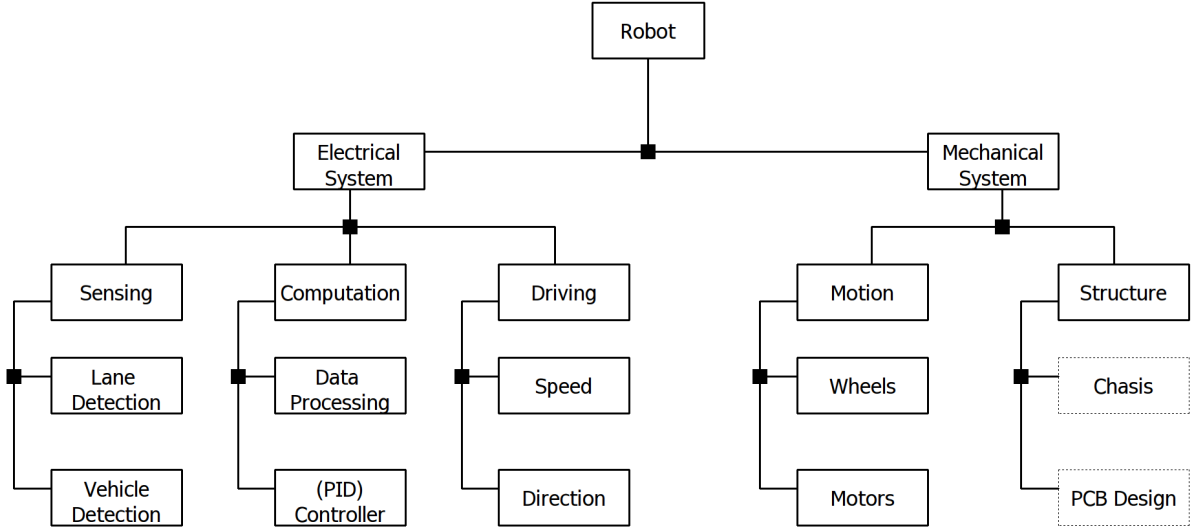


Figure 3: Project Subsystems.

- [Team] Subsystems are determined. Possible solution methods (pros and cons) for subsystems are determined (to be detailed in proposal report).
- [Team] Ultrasonic distance sensor is tested: Very bad accuracy for indirect surfaces.
- [Team] Discussions on Standard Committee meeting. Some the of topics are as follows:
 - Handshake protocol (communication ?)
 - Detectability of the front of a vehicle
 - Distance sensor bug (for ultrasonic one)
 - Elevation of path (specs of distance sensors)
 - Brake system (time to stop, same acc.?)

2 Plans

- [Team] Initial tests for sub-system solutions are to be made.
 - [Enes, Sarper] circular path follower using differential drive
 - [İlker, Sarper] different distance (IR, LASER) and color sensor tests
- [Erdem, Halil] Study of camera recognition using RPi, Python etc.



Members :

Enes Taştan, 2068989, 0543 683 4336

Sarper Sertel, 2094449, 0542 515 6039

Halil Temurtaş, 2094522, 0531 632 2194

Erdem Tuna, 2167419, 0535 256 3320

İlker Sağlık, 2094423, 0541 722 9573

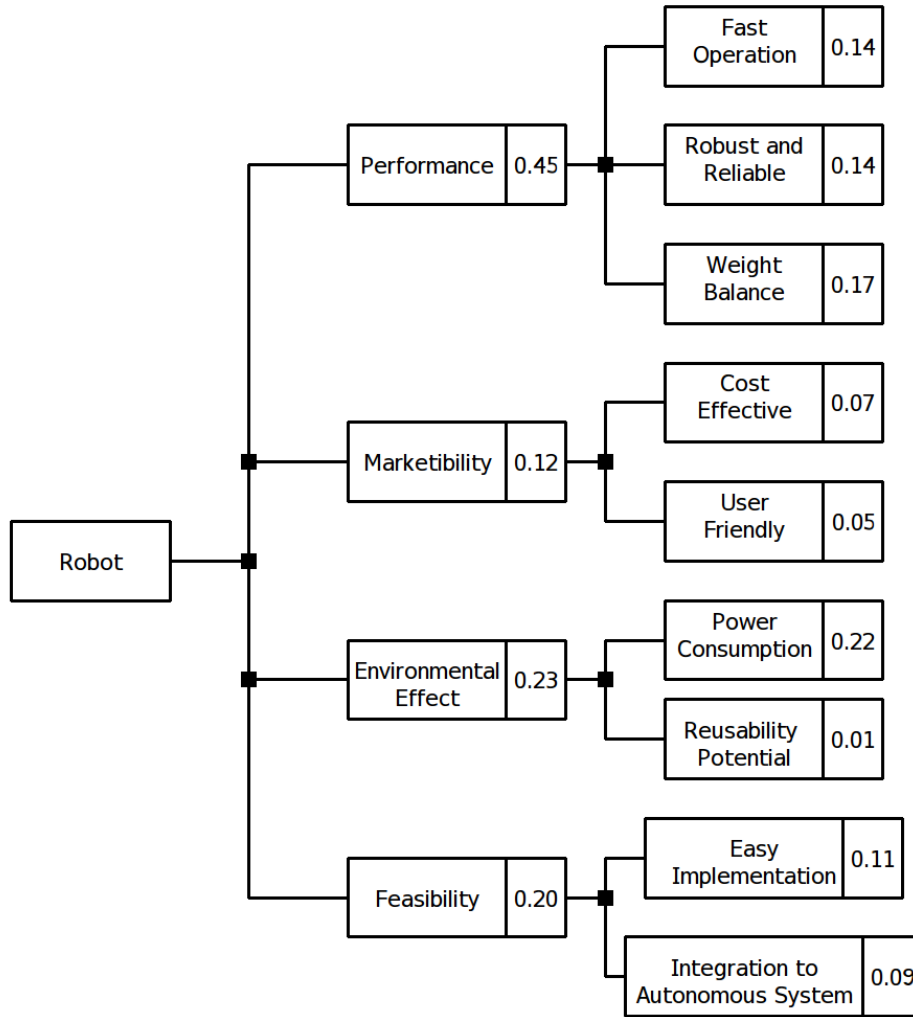


Figure 4: Project Requirements.

- [Team] Quantitative comparisons between solution methods according to test results.

