Duayenler Ltd. Şti.
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October 29, 2018
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October, 21-29 Weekly Report

1   Progress

- [Team] Criteria for objective tree are determined by giving weight to each criterion. The tree is used to choose the most suitable project among the four projects. The resultant objective tree is Figure 1.

- [Team] The project to be realized is determined according to the criteria listed in objective tree. 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
	1,6	2	0,96	0,4	0	0,32	0,36	
Air Hockey	8	8	4	8	2	6	8	5,84
	1,6	1,6	0,64	0,8	0,24	0,96	0,48	
Chasing Cars	10	8	8	6	6	8	10	7,48
	2	1,6	1,28	0,6	0,72	1,28	0,6	
Mapping	4	4	8	2	8	0	6	4,04
	0,8	0,8	1,28	0,2	0,96	0	0,36	

Figure 2: Project Evaluation.

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- [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).
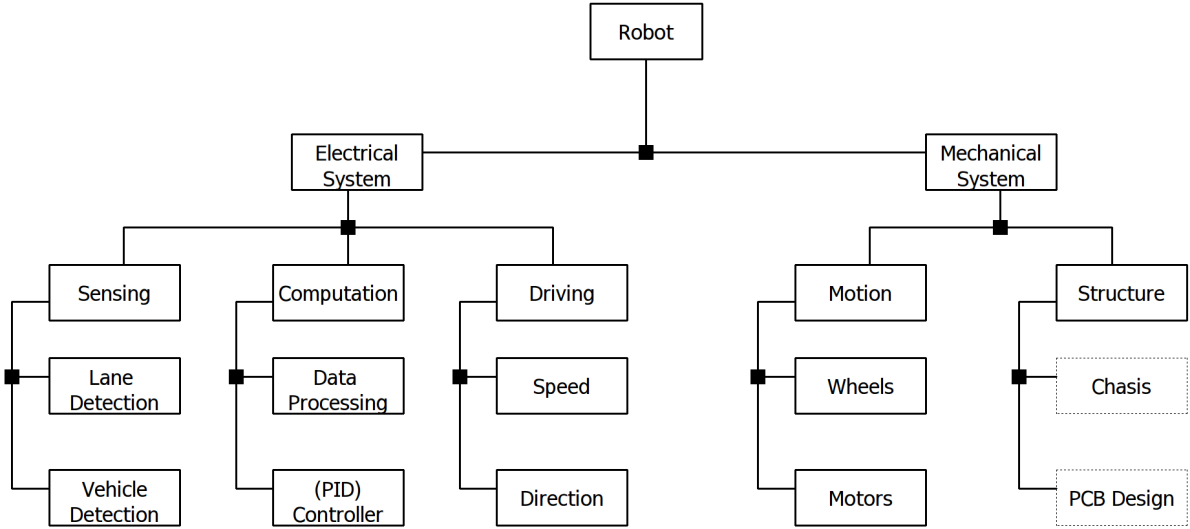

Figure 3: Project Subsystems.

- [Team] Subsystems are determined. Possible solution methods (pros and cons) for subsystems are determined (to be detailed in proposal report).

- [Team] 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
  - Detectability of the front of a vehicle
  - Distance sensor bug
  - Elevation of path
  - Brake system

2 Plans

- [Team] Initial tests for sub-system solutions are to be made.

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

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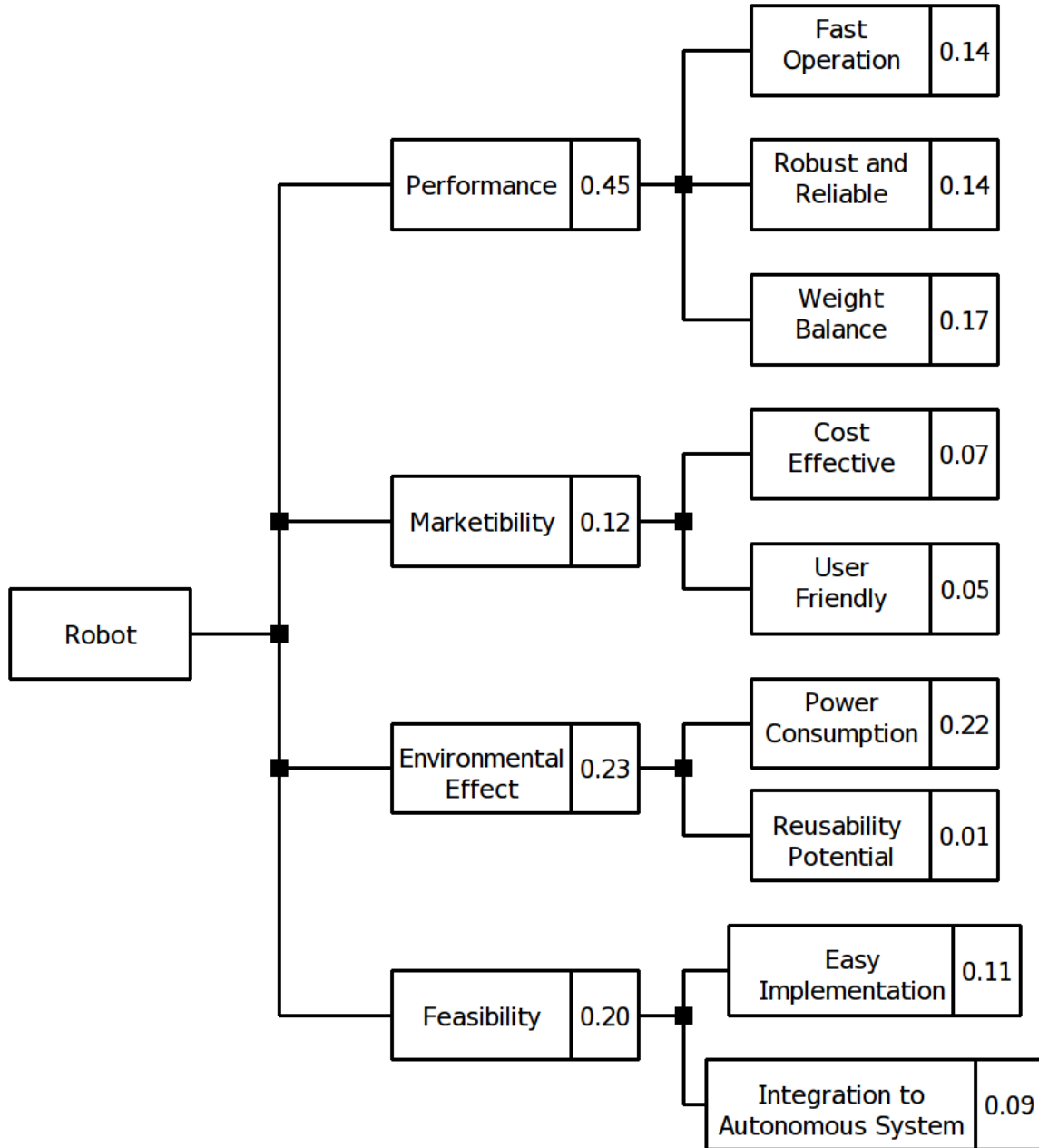Erdem Tuna, 2167419, 0535 256 3320
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Figure 4: Project Requirements.