System Design Project

Report 4 – Juozas Kaziukenas – s0820151

Immediately after the milestone 3 we had a meeting to decide on tasks we want to accomplish before upcoming friendly match. After a short discussion I had a list which I later transformed into a table of tasks, each put into a category (vision, strategy, simulator and robot construction), assigned to a person and due date when it needs to be finished. Having done this, I believe the team had better understanding on what tasks everyone needs to get finished personally. One of the things I learned as a manager is that without clear work plan and structure it's very hard for everyone to be focused on team goals.

My major achievement for milestone 4 was improving the workflow of using the software we have built in previous weeks. The thing we noticed in first friendly matches is that we can't start our robot immediately when a "GO" is given, because the "Start" button will need to establish Bluetooth connection and start vision processing. Even though this would work quite well most of the times, in some occasions Bluetooth establishment could become unreliable and we would lose valuable time of playing.

To this I extended our program to have two buttons "Start/Stop" and "Start/Stop execution". First one is the same as the one we had before, the only difference is now that it doesn't run the strategy once Bluetooth and vision are setup – it will wait for "Start execution" to be clicked. Thus allowing to not only star moving immediately when we want to, but also allowing to change strategies (from main to take-penalty for example) without reestablishing Bluetooth connection.

Related to program changes I have also modified the program running in a robot itself to never quit the program once it's started, making it easier to test our code on a robot without needing to relaunch the client every time we click "Stop" on the program. Once this was done I started integration testing of whole system to make sure it's stable and consistent. Results were mostly very good, just a few small issues with processing thread we have arose which I fixed by synchronizing main and processing threads.

I would consider my work done as something what made testing easier and also performance in matches and demos smoother and easier to control. As a team manager I spent a lot of time talking to everyone about the issues they had and how to potentially solve them, also including trying to involve members who are not involved enough (compared to others) more into to team work. My goal for upcoming matches is to extensively test the robot, making sure the strategies are working as they are supposed to and we do win the first place.