Group 10

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PROJECT 3: TEAM ORGANIZATION EVALUATION

Introduction

Over the course of three projects, the overall organization of our team has remained the same. We have incorporated a number of lessons learned as we have progressed and feel that our current plan is much more effective than the original one. There are a number of improvements that were made for this project and as a result of this project that we would like to highlight:

- Division of labor
- Communication of groups
- Increased milestone count
- Testing

Division of labor

The division of the team into the four groups of software, hardware, testing, and management seems to work quite well. Especially since there is a distribution of experience and responsibility throughout each group. For instance, the testing group has two members: one from hardware and one from software. This allows the testing group to have a firm understanding of both areas and gives them the ability to effectively test all aspects of the robot. The only minor improvement that could be made to this aspect of the organization is to solidify the roles and responsibilities of each group. For example, in all of the projects, the hardware group just built the robot and then handed it off to the software team. It would be beneficial to give the group the added responsibility of basic testing of the robot to make sure that it can meet the requirements of the design. All in all, we have found this division to be quite useful. The overlap minimizes the risk that a task will not get completed.

One aspect that has not worked out quite as expected is the assignment of a primary and secondary group member. While the intention was for the secondary to assist the primary, it has not worked out that way. In reality, there has been no real difference between the roles. This is not necessarily a detriment; it is just different than expected.

Communication of groups

For the division of labor to be effective, good communication is required. Otherwise, there will be expectations from all groups that may not be consistent. There seemed to be a lack of communication in this project, but we believe that this can be attributed more to team members' schedules at the end of the semester than anything else.

Increased milestone count

One improvement we have made since past projects is the addition of more milestones. Furthermore, most milestones had a demonstrable goal that could test achievement of the milestone. In this project, time requirements beyond this class prevented the team from

making many of the milestones. However, the concept of the milestone tests was quite useful in not only prioritizing the required tasks but also helped in gauging progress. This is definitely something that we would use again in future projects.

Testing

In our timeline, we had originally planned to have some initial testing a number of days before the official testing phase began. Only a few simple tests were planned in an effort to identify any fundamental flaws while there was still an opportunity to fix it. Time constraints prevented us from performing this testing, which is unfortunate, because it would have probably shown that our robot had significant difficulty driving straight and performing accurate turns. We were able to correct for the driving problem, but there was not enough time to correct the turning problem.

Summary

We believe that our current organizational plan and approach to generating the timeline is more than sufficient. When implemented correctly, it not only gives all members the opportunity to gain experience in a number of the required tasks, but it also mitigates risk. The overlap in group experience allows each group to work as effectively as possible. The only problems that we experienced where in our implementation of the plan.