
Team Organization Evaluation & Plans

Group 9 – Project 3 – 1 May 2003
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Team Organization:

In determining the organization for this project, the group decided that the previous organization of a simple master/apprentice type system divided into hardware and software was beneficial. However, for this project, the group consisted of only 3 members instead of four, and the organization called for 4 members. This meant that one team member had to take on the responsibility of working on both the hardware and software teams. The organization was as follows:

Hardware Team: This team was composed of a senior member and a junior member. The roles were slightly reversed, in that the junior member was the one who **built** the robot, while the senior member was there for technical advice, design issues, and experience. This is very similar to a master/apprentice system, where the junior member learns by actually doing. The senior member of the *hardware team* for Project 3 was the *builder* from project 2, while the junior member of the *hardware team* was the *senior software member* from project 2.

Software Team: This team was also composed of a senior member and a junior member. The roles again were slightly reversed, with the junior member being the primary **coder**, while the senior member was more of an advisor for technical advice, design issues, and debugging. In this way, the junior member was able to learn much more than he would by merely watching the senior member code. Most people learn more by doing than by watching, and this was the idea behind the system. The senior member of the *software team* for Project 2 was the *builder* from Project 2, while the junior member of the *software team* was the *senior hardware member* from Project 2.

It is important to note that while the Hardware and Software *implementation* was performed separately by the two teams, the *design* was agreed upon by the entire group in group meetings. This allowed the maximum amount of knowledge and experience to be brought to bear upon the situation.

Evaluation of Team Organization:

By organizing our team in the above manner, we did have success in our meetings. Each of us was able to work well with the other group members, and the organization helped build a working, effective robot. Having one person as the senior member of each team helped fuse the two teams together and made the transition from hardware design to software design smoother. The basic hardware design was completed quickly, agreed upon by both teams. The software design was also completed quickly, though the implementation took longer than expected. Even though the software design was simple,

the procedures to be written were complex and time consuming. The primary coder for this project did a remarkably well job for the time that he had to complete the project.

Neither the software design nor the implementation effected the hardware design. This supports the fact that our hardware and software integration went smooth and was well thought out.

What went well: The interaction between group members and each individual's hard work were the main reasons the group was able to accomplish what it did. Every group project relies on how well the group is able to work with each other. The hardware design was also a success. The robot was able to grasp and contain the blocks due to this design. As for the software, the robot was able to make precise turns and move relatively straight due to the coding of the encoders. The group was also proud of the design of the software but was not able to complete it. The idea of the coder submitting a report every few days detailing what needs to be finished and the problems he is having worked well. The group members always knew where the project was and how they could help.

What went badly: As the last two projects have proven, the task of software design and coding is the most difficult and important task. Otherwise, all that the group accomplishes is a nice looking robot that does nothing. The group spent many hours working on the code for this program, especially the coder for this project. Despite the fact that many hours were poured into this section of the project, the complete design of the software was not finished due to lack of time.

CONCLUSION:

In conclusion, the overall organization of the group was quite effective. Having one person as the senior member of each team helped fuse the two teams together and made the transition from hardware design to software design smoother. This team organization is a solid architecture for future teams in this course. It is highly recommended that the communication between group members is good. Using reports that detail where the coder or the builder is on the project and what issues they are having help other members to contribute to the project.