
Team Organization & Task Allocation Proposal

Group 9 – Project 3 – 13 April 2003
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Original Team Organization:

The organization of Group 9 has changed once again between projects. The responsibilities of our team during project 1 and project 2 were spread out between four people. Due to a lack of friction between team members, the team now consists of only three members. Originally, the class was modeled to have four projects, with each member getting the chance to work on a different task. The original four roles decided upon was a *group leader*, which was the person in charge of organization, insuring tasks were being executed, and paperwork/documentation. The second role was that of the *tester*. Working with both the hardware and the software, he would be the person in charge of figuring out how to best integrate the two and successfully test the performance of the robot. The third role was that of the *coder*. Taking the rough software design worked out in the meetings, the *coder* would then implement the pseudo-code into usable code and begin debugging and rudimentary testing. Finally, the last role was that of the *builder*. The *builder* was in charge of the design and construction of the physical characteristics of the robot.

Unfortunately, this configuration suffered from several fatal flaws. Since this project had all of the group members in tasks they were weak on, the tasks were not accomplished as well as they could have. For this reason, we changed our organization for project 2. We decided that most groups had success with a 2-man software team and a 2-man hardware team. The teams were further broken down into a senior member and a junior member. The senior member's responsibilities included technical advice, design issues, and experience, while the junior member's responsibility was to build or code the robot.

We found this organization for our team to be very beneficial. Even though we had two separate teams, each team got together to discuss ideas for the design of the hardware and the design of the software. Having two members on each team guaranteed more experience and help on separate issues. Because of this, we were able to recover from inexperience and failures more rapidly and more efficiently.

New Team Organization:

In reviewing the organization of our last project and its success, we have decided to stay with that scheme of organization. However, as mentioned above, the organization will have to be tampered with since there are only three team members. There will still be a hardware team and a software team both containing two people. This means that one member will be on each separate team. This role will be very similar to the tester role for project 1 in that the member will work with both teams. The organization is as follows:

Hardware Team: This team is composed of a senior member and a junior member. The roles are slightly reversed, in that the junior member is the one who will be **building** the robot, while the senior member is 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 is the junior member of the hardware team from project 2, while the junior member of the *hardware team* is the senior member of the software team from Project 2.

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

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

Tasks:

The tasks are as follows (*in rough chronological order*):

- Team Organization and Task Allocation Document*
- Timeline with Milestones and Fallback Plan*
- Hardware Design (*group meeting*)
- Chassis Construction
- Software Design (*group meeting*)
- Software Construction
- Testing (*group meeting*)
- Demonstration
- Presentation
- Robot Code & Documentation*
- Robot Design Documentation*
- Team Organization Evaluation*
- Final Report*
- Peer Reviews (*individual*)
- Team to team review forms (*individual*)
- Project 3 presentation review form (*individual*)

*Also includes electronic submissions of these documents

Task Allocation:

The tasks will be assigned to group members as follows:

Joshua Page: *responsible for coding* - primary coding design, construction, and software documentation.

Tim Stevens: *hardware assistance/coding assistance* - Team Organization and Task Allocation Document, Timeline with Milestones and Fallback Plan, Team Organization Evaluation, Final Report, Presentation

Jangho Yoon: *responsible for hardware construction* - primary hardware design and chassis construction, hardware documentation, Presentation.

Group Work: Hardware design, Software Design, Testing, Demonstration.

Individual Responsibilities: All review forms.

The reason for this allocation is as follows:

Josh is the junior member of the software team. His main focus should be on writing the code and initial testing of the code to insure it works. Since there are only three projects and he has not coded yet, this is his main responsibility.

Jangho is the junior member of the hardware team. His main focus should be on coming up with the most efficient, simple, and effective software design possible. Since he was the coder for project 1 and member of the software team for project 2, it is his responsibility to construct the robot. Also, he will be splitting the presentation with Tim since neither member has contributed to that portion of the projects.

Tim is the senior member of the hardware team and the senior member of the software team. It is his responsibility to help and integrate both teams. He also has the responsibilities of the two initial reports (team organization & the milestones), the Team Organization Evaluation, the Final Report, and half the presentation because he has taken a technical writing course.