Team 1
Jeremy Branecky
Camilo Reyes
Stephen McKinney

Project 1:
Organization and Task Allocation Proposal

CS 4023/5023
Dean Hougen
01-30-04

Team Organization

The organization of our team is important to the success of this project. We have decided to use the concept of a changing leader for the organization of our team. This style of organization will give each person on the team a chance to lead a project. One job of the leader will be to keep everyone on task and informed on how things are going. Another job of the leader is to give the final presentation after the project is complete. Even though one person is given the title of leader, the team as a whole can be seen as a democracy, that is, other team members will have an equal say in each project. We feel that with a chosen leader, the projects will be better organized than if no leader was made.

The workload for the project will be divided as evenly as possible between all members. If a team member that feels too much work has been placed upon them, then the group will discuss the problem and the workload will be picked up by the other members. We broke the project into three main parts; hardware, software, and paperwork. Each member will mainly be assigned to one part of the project and will organize and plan for each part. Assigning one member to a part of the project does not confine him to work only on that part; instead each member of the team will be expected to give input and time on each part.

Task Allocation Proposal

The tasks for this project were assigned based on who wanted to do what. All of the team members have had much software experience, and little hardware experience. None of the members have had any robot experience so dividing the tasks was tough.

Some of the tasks will be done by the entire team. Having more brains on certain parts will create more ideas and will help the project run smoother. The hardware and software design as well as the robot testing will be done by the whole team. These three tasks of the project are very important and we want to make sure that they are done well. Other tasks will be organized by one person but the entire team will help.

For the first project, Stephen will work mainly on the hardware, Camilo will work mainly on the software, and Jeremy will work mainly on the paperwork.

Since no one has had any robot experience, we used our knowledge of building software to formulate eight tasks that need to be completed for this project. The tasks are high-level and can be broken into smaller ones. The tasks that need to be completed for this project are labeled with who will work on what task. The tasks are as follows:

- Hardware design – Team
- Hardware implementation – Stephen/Team
- Software design – Team
- Software implementation – Camilo/Team
- Robot testing – Team
- Paperwork organization – Jeremy
- Group presentation – Camilo

A very important part of the project will be the hardware design. Without a well designed robot, the goal may not be reached. In order to give everyone an understanding of how the robot works and to help with the lack of robot knowledge, we decided to design it as team. For this project, we will use one of the designs from the Martin book, along with projects done by groups in past classes to guide us. Once we have a good foundation for the robot design, we may tweak it to give it a unique feel.

The next task on the list is hardware implementation. This tasks needs to be completed in order for the robot to be built. Stephen was assigned to the hardware implementation because he felt comfortable putting the robot together. He will follow the design that the team created in order to build a working robot. Because of the fact that software is built around hardware, we decided it would be best to complete the hardware implementation before we start the software. Waiting until the hardware is complete will keep the software from having to change. As in the design, we will use the Martin book to put the robot together.

Another important task that needs to be completed for this project is software design. Without a good software design, the code could become hard for the team to follow. The team will design the code together in order for everyone to understand the concept behind the robot. Since all of our members have software experience, designing the software should not be hard. We plan on using UML along with the Martin book when designing. We will also review projects done by groups in past classes to get ideas on certain parts.

Once we feel that a good design has been created, we will begin to program. Camilo will head the software implementation. His experience with programming C should be beneficial to the team. We plan on using some of the example code from the Martin book and projects done by groups from past classes for certain parts of the project. Programming the robot to turn accurately, as well as creating accurate senses are just two areas we will look for help on.

Once the code is complete, the robot needs to be tested. The team will get together to test the robot. Having the entire team together will help with the troubleshooting. The testing phase will be one of the most important tasks of the project. Due to our lack of experience, we may have to spend quite a bit of time testing. In order to test the robot, we will try and build a close to accurate environment. This may be difficult because we do not have access to the room where the demonstrations will take place.

Another task is documenting the process of building the robot. Jeremy was given this task because it was the final part of the project to be assigned and he enjoys typing. Jeremy will keep in touch with everyone as the project progresses in order to keep the project well documented. He will be responsible with typing all of the documents that need to be turned in. The other group members will help Jeremy formulate the data that he needs.

The final task that needs to be completed is the presentation for the project. Since Camilo is the leader of this project, he was assigned the task of giving the final presentation. The group will meet to assist with the design and writing of the presentation. We hope to use a group template for the presentation that every member can use when it is their turn to present. Having one template will give our team presentations a more formal look.

All of these tasks need to be completed in order for our project to be a success. We have proposed dates for each of these tasks to be started and completed. These dates are listed in the milestone timeline and feedback plan.