

## **Task Allocation**

Project 3

Team 3:  
Mark Branson  
Amit Mathur  
Matt Roman  
Mike Taylor

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## General Team Organization

The core philosophy regarding the team organization will not change from the last. We found that the existing structure for handling task allocation is working very well, and we think this project will be given our best members for their respective best tasks.

Like before, there will be a team leader who will organize all team interaction and oversee the completion of deadlines and milestones. He will also handle interaction with Dr. Hougen and settle any disputes between team members that may arise. The remaining team members will be assigned subtasks. For this project, being our last, we will assign each member to their best suited task as best we can.

## Task Division

The following division was decided democratically on the first project. Since then, it has served us well and we have found no reason to alter it. We have found that this arrangement evenly spreads out responsibility and still allows us to use the most specialized people for what they are good at.

Major Tasks:

**Supervision/Management:** Team leader job as described above.

**Hardware:** This team member is responsible for Lego construction and sensor placement. They will coordinate with the rest of the group regarding the general design plan, and then will have freedom in how to implement their side of the plan. They will especially need to coordinate with the software person to ensure the sensor arrangement fits in with their plans for software design.

**Software:** This team member will construct the software that runs the robot. Initially, they will be working abstractly, with no robot to test on. As the hardware person gets a working drive train and chassis together, the software and hardware people will work together to build the rest of the robot in parallel.

**Documentation:** The documentation member will have the responsibility of keeping up with exactly what the rest of the team is doing design wise in full detail. They will write up all material that is to be turned in.

Minor Subtasks:

**Presentation:** This subtask represents the final presentation to the entire class. This task will require a high level understanding of the robot implementation and will most likely be undertaken by the team leader.

**Testing:** This subtask involves making sure every component of the hardware works, every module of the software behaves correctly in all situations, and that the goal is accomplished by the robot. This task falls on every team member, but the software and hardware people will shoulder the greatest burden of testing due to their intimate knowledge of the design.

**Design:** Before major work can be done, we will need to create a design blueprint of how the robot will accomplish its task. Initially the design will be a skeleton, but as the robot is built we will fill in the details of how each part of the design will be implemented. This is the most democratic of the subtasks, in that everyone is involved. However, in the end only the documentation person will actually write up the design.

**Support:** The supporter task is a fallback insurance job. Most likely this will go to the team leader, and they will be responsible for helping the hardware and software people in making their deadlines if a problem crops up.

## Team Member Assignments

This being the final project, we will be pulling out all the stop regarding reserving certain team members for later projects. With that in mind, we have placed the experts into their field and the rest of us into the more supportive, less skilled roles.

**Mark Branson:** Mark will be the software person for this project. He works for Dr. Miller and has acted as the Teaching Assistant to Dr. Miller's artificial intelligence class. His intimate knowledge of how to apply intelligence into a machine will be of key importance in the final project.

**Matt Roman:** Matt will be in charge of hardware for this project. He is a mechanical engineer and works in Dr. Miller's lab building robots. He has good experience working with handyboard based robots and a significant understanding of how drive train based mobility works.

**Mike Taylor:** Mike will serve as documentation person. His skills with the English language and general wit will serve to make all documents thoroughly more readable. Also, the main jobs have been assigned and for fairness, Mike will not be taken the leader position again.

**Amit Mathur:** Amit is the team leader for project four. He has served in almost every other capacity for our group, and will make an excellent choice for

watching the project from a comprehensive standpoint. He will be responsible for the holistic health of our robot.

All team member have agreed to this separation of power for the project, and we feel it will maximize the potential for making a successful robot.