

Timeline and Fallback Plan

Project 2

Team 3

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Project 2 Milestones

Brainstorming- Initial group meeting to discuss overall robot hardware and software. Ideas of what sensors to use and general design of the robot will be evaluated to give the hardware person a few outside ideas. The overall behavior of the robot and functions that can be used to aid in programming will help the software person obtain an overall view of what the team is expecting.

Robot Construction- The physical robot that the team will use for testing and eventually the final test.

Testing Phase 1- This is the first of a few tests that will be done throughout the completion of the project in order to find mistakes and correct them early on. This phase will solely involve the hardware. The handyboard will be used to make sure that it will fit with room for sensor connections. Simple motor and sensor control programs will be run to ensure that the hardware is functioning properly.

Software Composition 1- Initial code used to achieve goals in the testing phase of the robot. Variables in this code should be easily identified and changed by the testing team.

Testing Phase 2- This phase will combine the completed hardware and initial software program to ensure that the general program architecture will work. Sub functions will be run independently to observe their behavior.

Software Composition 2- All functions that were tested are modified if need be and combined into a single program.

Testing Phase 3- Complete robot with all sensors, motors, and a program with minimal calibration required to be tested in an area similar to the actual test site. All members are required to be there.

Final Analysis- Construction of final report including pros and cons of our design. The final presentation will be evaluated and commented upon by other group members. This will ensure that all information is correct before the class presentation.

The dates for completion of these milestones are listed below in table-1.

<u>Milestone</u>	<u>Due Date</u>
Brainstorming	
Robot Construction	3/11/2003
Test 1	3/12/2003
Software 1	3/13/2003
Test 2	3/14/2003
Software 2	3/23/2003
Test 3	3/24/2003
Final Analysis	3/30/2003

Table -1 Deadlines

Fallback Plan

The main two objectives in designing and building the robot for this project are the robot itself and the program that will control it. If either of these two tasks is corrupted in any way the final product will not function correctly. A plan has been agreed upon by everyone on the team to ensure that the overall flow of the project will be completed.

The initial flow of the project will proceed as shown in figure 1:

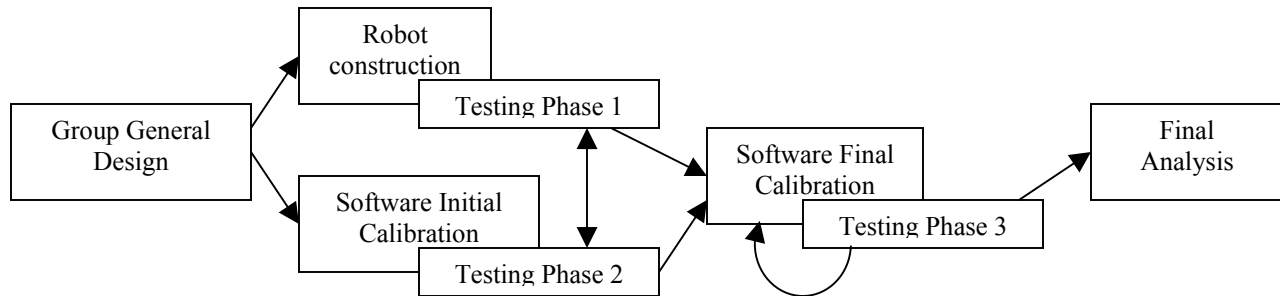


Figure 1: Primary Flow

In the event of a missed deadline a team meeting will be called upon as soon as possible in an effort to correct the project timeline. The current timeline will ensure that if a deadline is missed we will have at least one extra day to correct for each major task and still be on track for the final demonstration. The person with the most experience in the design of the particular task that needs to be accomplished will be responsible for helping the assigned team member in completing that task. Figure 1 shows that testing phase 1 and 2 have to be completed before the final software calibration can be done, this flow will ensure two critical points. The first is that the team stays on track with the proposed timeline, and second that we do not achieve a final state with a major design error that has propagated from initial construction or code implementation.