Group – 7 Project 3
TIMELINE MILESTONES AND FALLBACK PLAN

Hardware Timeline:

Milestone #1: April 14, 2003. – Basic Design.
- The hardware team should have a working design to bring to the table.
- Consider limitations and restrictions of sensors and how to compensate for this deficiency.

*** Sync_1 ***
*** Sync_2 ***

FALLBACK PLAN: If the basic robot design is not agreed upon or has not been
completed by this date then we will hold meetings on April 15 and will be completed
by then so that the project can continue.

Milestone #2: April 16, 2003. – Robot construction completed.
- Robot construction is completely finished along with all of the sensor layouts and design. The robot will have been tested with the software to ensure that all of the sensors have readings and the basic motor control of the robot is functional. This does not require that the robot achieve the task of the project.

FALLBACK PLAN: If the robot does not work properly then all 4 of the group
Members will meet Thursday and Friday of the week to have the robot working.

*** Sync_3 ***

Milestone #3: April 23, 2003. – Robot design is finalized.
- In this milestone the robot design is completely finalized. The co-ordination between the hardware the software is completed and the robot functions as planed. All the tests are successful with no errors or mishaps.

FALLBACK PLAN: If the robot does not work by this time then all the group members will work together to resolve the issue whether it is a hardware or a software issue. If it is a software problem then the hardware people will research the problem to come up with a solution and vice versa for the software people. We should do this by April 21st.

*** Sync_4 ***

Milestone #4: April 29, 2003. – Documentation Completed.
- All documentation on the robot hardware will be completed and compiled against the software documentation and presented in the final report to be turned in.

Software Timeline:

Milestone #1: April 14, 2003. - Choose development computer (Laptop?).
- First of all, we need to decide on a centralized computer to house the team's software. This is done to ensure version integrity by allowing only one person or group to work on the code at a time. For each project the senior software member should volunteer their personal laptop. If for any reason this is not possible, the junior member can offer an alternative by providing another laptop.

- Install/Check Interactive C(if necessary):
  Download Interactive C to the development computer. This can be accomplished through the class web page. Once installed, run simple command line testing to test basic functionality of the IC.

*** Sync_1 ***

Milestone #2: April 16, 2003 - Initial software development:
- This is where the software team first attempts to materialize the custom code. This code should perform limited movement instructions to hash   out the basic range of movement of the robot: turning radius, speed,   skid steering, etc. The team should eventually come up with an abstract   motor library, comprised of a number of functions to allow basic movement of the robot. If possible functions such as turn(double   degrees) and move(double feet) should be included.

*** Sync_2 ***

Milestone #3: April 23, 2003 - Full robot behavior, code testing:
- This stage marks the point at which the sensor code has been   successfully integrated with the motor interface to provide limited   capability to the robot. Once this has been accomplished, the team   should enhance the code by adding error checking, exception handling, limited adaptability and any other features necessary to help the robot perform at a higher level. This stage should be considered somewhat recursive and could be visited multiple times.

*** Sync_4 ***

Milestone #4: April 29, 2003 - Code documentation:
- At the end of the project the code should be documented. However, this does not mean that the code will not have any documentation until this point. Throughout the development process it should be necessary to keep adequate documentation of the code to promote clarity between team member as well as clarity to the author.

Synchronization Definitions:

Sync_1: Initial spin the wheel test – This test will determine whether the software and the hardware is set up correctly. The robot design does not have to be completed but the communication between the software and the hardware must be successful.

Sync_2: Basic Movement Test – The basic robot design will be completed. Although the deadline for the robot design to be finished is Mar 17, there should still be a basic prototype to test the movement that the software designers have developed to be tested on the hardware.

Sync_3: Movement and Sensor Test – This time the robot design should be complete. All of the sensors should be tested and functional and movement should be almost completed. All the readings should be accounted for in the software from the sensors in the hardware, although the final logic in the software does not have to be fully functional.

Sync_4: Test run in real world environment – This should be the completed version of the robot. This gives us 2 days to refine any bugs that may occur, but any development of the robot should be completed or finalized by this time.

Timeline Milestones with Fallback Plan:

Timeline Milestone	Hardware team	Software team
April 14	Milestone #1	Milestone #1
April 16	Milestone #2	Milestone #2
April 17-18	FALLBACK PLAN	FALLBACK PLAN
April 23	Milestone #3	Milestone #3
April 24	FALLBACK PLAN	FALLBACK PLAN
April 28	Milestone #4	Milestone #4
April 29	FALLBACK PLAN	FALLBACK PLAN