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EX-Bots
Progress Report #7
2/06/2006

Website URL: http://www.ce.rit.edu/research/projects/2005_winter/rt_ex-bot/

Project Description: The objective of this project is to create a robot that will be capable, with the assistance of a PC, of mapping an area, approximately 15 feet by 15 feet, then navigating the mapped area. The system will have a java-based user interface with a display of the mapped area and some controls and will communicate via 900MHz RF modules. The robot will make use of ultrasonic sensors, a magnetic compass, and infrared phototransistors for mapping and navigation. The robot will use the I^2C standard for communication with the sensors (except for the phototransistors).

Project Timeline and Milestones:

Notes:
Dark Grey background: Completed
Grey background: Past Due
"None" in the Old Completion Date means that it is a new task
(These notes apply to all tables)

Item Description	Primarily Responsible Member	Old Completion Date	New Completion Date	Comments
Setup User Interface	ME	12/6/2005	No Change	
Finalize Project Algorithms	ALL	1/12/2006	No Change	
Conclude Bluetooth Research	ERS	12/16/2006	No Change	
Create Website Template	ERS	12/13/2005	No Change	
Aquire All Hardware	TCL	12/16/2005	No Change	
Implement Buttons/Map Function	ME	12/16/2005	No Change	
Test Component Functionality	TCL	1/12/2006	No Change	
Implement Mapping Software	ME	1/31/2006	No Change	Major progress has been made
Construct Robots	TCL	1/31/2006	No Change	Very close
Write Avoidance Alrorithm	TCL	1/13/2006	No Change	
Rewrite Project Proposal	ERS	1/24/2006	No Change	
Implement Packet interface	ERS	1/31/2006	No Change	
Test Avoidance Algorithm	TCL	1/31/2006	No Change	Still completing construction
Write Path Finding Algorithm	ME	1/31/2006	No Change	More than half way
Test User Interface Functionality	ME	1/31/2006	No Change	Ongoing, so far so good
Test Path Finding Algorithm	ME	1/31/2006	No Change	works good on interface
Find New Java Interface Tool	ME	1/31/2006	No Change	
Update website	ERS	1/31/2006	No Change	
Test Terrain Mapping	ALL	1/31/2006	No Change	Unable to start due to above concerns
Bluetooth Module Functionality	ERS	2/5/2006	N/A	No longer Using Bluetooth
Order RF Modules	ERS	None	2/7/2006	Will get overnight shipping
RF Module setup	ALL	None	2/10/2006	
System Functionality Testing	ERS	2/10/2006	2/14/2006	
Write Final Report	ERS	2/15/2006	2/14/2006	
Demo Poster	TCL	2/17/2006	2/14/2006	
Team Assesments	ALL	2/22/2006	No Change	
Finish Website	ERS	2/24/2006	2/14/2006	

Items completed for this report:

Item Description	Primarily Responsible Member	Old Completion Date	New Completion Date	Comments
Bluetooth Module Functionality	ERS	2/5/2006	N/A	No longer Using Bluetooth

Items to complete by next week:

Item Description	Primarily Responsible Member	Old Completion Date	New Completion Date	Comments
Implement Mapping Software	ME	1/31/2006	No Change	Major progress has been made
Construct Robots	TCL	1/31/2006	No Change	Very close
Test Avoidance Algorithm	TCL	1/31/2006	No Change	Still completing construction
Write Path Finding Algorithm	ME	1/31/2006	No Change	More than half way
Test User Interface Functionality	ME	1/31/2006	No Change	Ongoing, so far so good
Test Path Finding Algorithm	ME	1/31/2006	No Change	works good on interface
Test Terrain Mapping	ALL	1/31/2006	No Change	Unable to start due to above concerns
Order RF Modules	ERS	None	2/7/2006	Will get overnight shipping
RF Module setup	ALL	None	2/10/2006	
System Functionality Testing	ERS	2/10/2006	2/14/2006	
Write Final Report	ERS	2/15/2006	2/14/2006	
Demo Poster	TCL	2/17/2006	2/14/2006	
Finish Website	ERS	2/24/2006	2/14/2006	

Comments, Questions, and Difficulties:

Difficulties:

Comments:

Gave up on Bluetooth due to unavailability of interfacing needed. RF modules have been picked out instead and will be ordered as soon as all team members have looked at the specs.

Robot construction needs slight updating due to the removal of the Bluetooth circuitry. Otherwise all that remains is the placement of the ultrasonic sensors on the servo motors.