Progress Report
BE Projects 2011-12

Wall Building Robot

Team no 16

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1 Project Title:

Wall Building Robot

2 Project Objective:

The working mechanism starts with the ceiling camera capturing the image of the arena and detecting the white strip placed. The wall needs to be built on this white strip. So the camera will process the co-ordinates and feed it to the robot.

Now the robot will pick the brick from the nearest location and place it at the co-ordinates fed. The camera will again feed the next co-ordinates to the robot and the process continues.

Once the first layer is built, the co-ordinates now fed are the same as the initial ones. But now the sensor will detect the height of the first layer and will place the brick at the co-ordinate of the lower brick but as the second layer.

As soon as the required height of the wall is achieved, the robot will stop building.

3 Project Timeline:

Month	Periodic Slot	Activities
October	1st-10th	Project Topic Selection and presentation.

	11th-20th	SRS preparation
	21st-30th	Moodle link received and SRS submission

Month	Periodic Slot	Activities
November	1st-10th	University practicals and vivas.
	11th-20th	Visit to lab for hardware collection and study of hardware.
	21st-30th	Study of different softwares to be used and preparation for exams.

Month	Periodic Slot	Activities
December	1st-10th	University Exams
	11th-20th	University Exams
	21st-30th	Getting acquainted with basic operations performed by MATLAB used in image processing.

Month	Periodic Slot	Activities
January	1st-10th	Interfacing of camera with the system with the help of MATLAB for image processing and began working on images captured.
	11th-20th	Collecting the required materials, designing the arena and preparing stand for the camera.
	21st-30th	Visit to lab for discussing problems of creating virtual grid and obtaining the co-ordinates of the strip and trying to implement the same.

4   Individual Role/Contribution:

Team Member	Role Contribution
Prasad Borole	Working on MATLAB for image processing of the arena and white strip within.
Mukeshkumar Choudhary	Working on the hardware modules and understanding the various library files and codes.
Pallavi Jain	Working on MATLAB for image processing of the arena.

5   Current Status of Project:

We are now trying to find out some algorithms and functions/methods for finding and locating the exact co-ordinates of the strip and communicating the same to the robot. We will soon be starting with the designing of the robotic arm that will be needed for the pick and place operation of the bricks.