

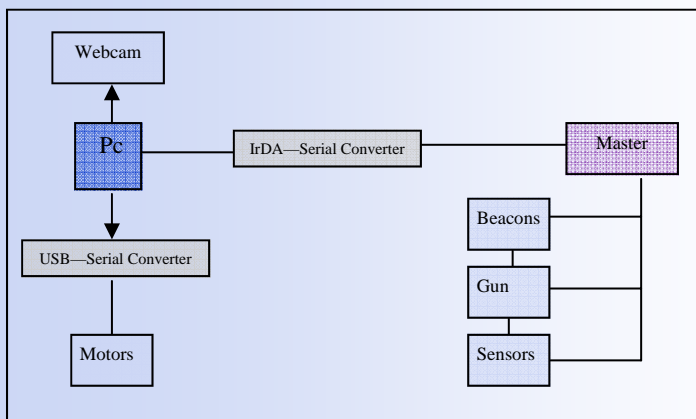


Eurobot 2005 ROBOCT

TEAM

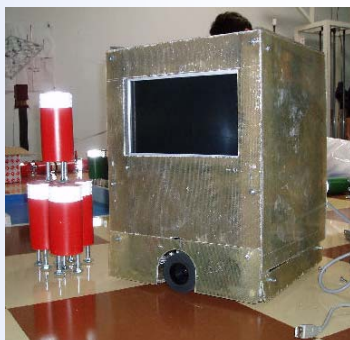
Albani Yvan, Bonaccorso Filippo, Caniglia Enza, Chiantello Dario, Cosentino Gaetano, Di Stefano Antonino, Dominante Nicola, Fichera Stefania, Guarrera Enza, Incorvaia Emanuele, Inzerilli Giuseppe, Minuto Alessandro, Motta Sebastian, Paglia Gianluca, Rapisarda Salvatore, Salerno Mario, Scordino Giuseppe, Serra Claudio, Tomasello Vincenzo.

Primary Robot



Gun

Gun permits the robot to lay down the skittles through squash balls, which will be shot by using a mechanism consisting of a dc motor, belts and pulleys. Two servomotors regulate balls flow. The peripherals are controlled by a microcontroller ST5 linked, through a bus, to central control.



Motors:

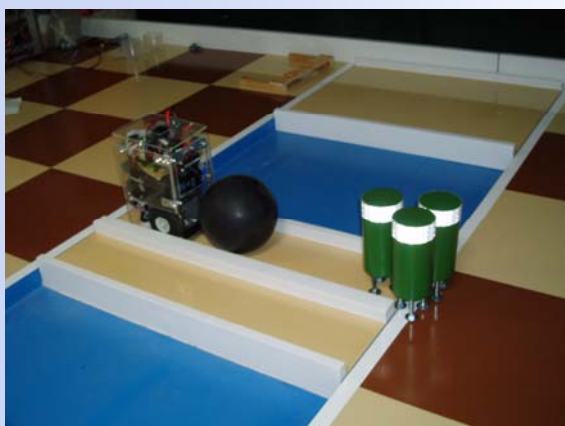
Robot has two dc motors “Easy roller” those are checked by a Delphy program through RS232.

Beacons

Beacons aim is to recognize the robot position and his orientation on the playing area. The system is made up by three fixed beacons on the field and one goes up on the robot.

Vision

Vision has a double task: find bridge position and skittles. Robot has two different vision strategies: the first based on deterministic approach, the other on stochastic one. Both these strategies are used in the bridge position detection, or alternatively for the skittles following



Secondary Robot

Secondary Robot has to look for the fixed bridge and push the black ball to lay out the skittles placed in front of the ball. The robot has a sensor that permits to establish the colors transition, so that it can turn correctly on the playing area; besides it has a CMU-CAM to line up itself with the balls placed on the bridge extremity, with two step motors