QUESTIONNAIRE

RoboCup Humanoid League 2006

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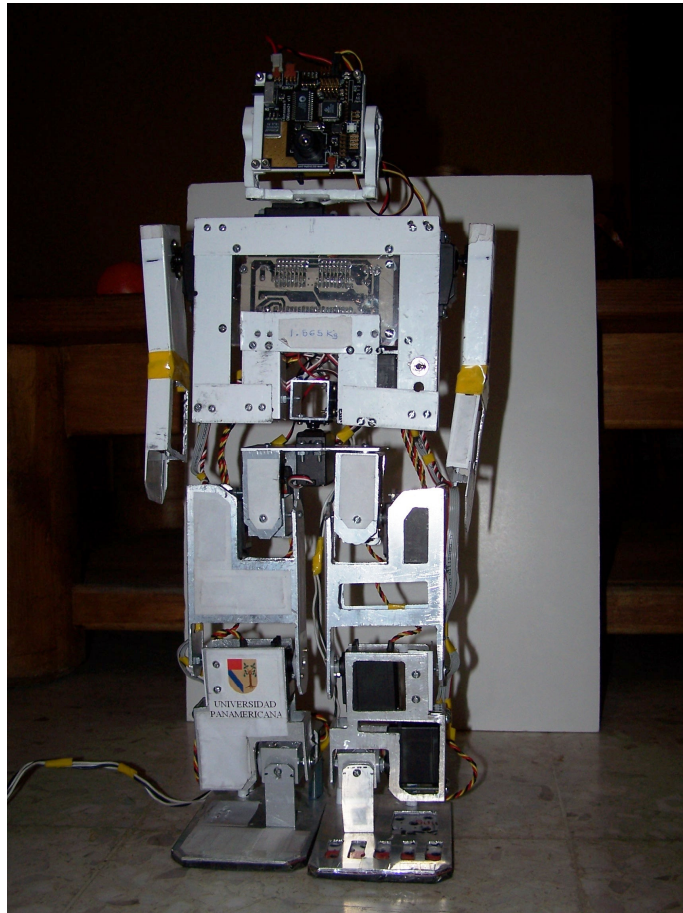Panamerican University, Campus Guadalajara

1 Image of the robot

Fig.1. Image of the robot (Charrobot)

2 Name of the robot

Charrobot

3 Robot height

52cm

4 Weight of the robot

2.1 kg

5 Walking/speed

0.5m/min

6 Number of degrees of freedom (DOF)

16 DOF

Developing each one of the parts of the robot we have:

Head: 2 servo motor, therefore we have 2 (DOF)
Arms (2): 1 servo motor in each arm, therefore we have 2 (DOF)
Waist: 2 servo motors, therefore we have 2 (DOF)
Ingle: 4 servo motor, therefore we have 4 (DOF)
Knee (2): 1 servo motor in each knee, therefore we have 2 (DOF)
Ankle (4): 2 servo motor in each ankle, therefore we have 4 (DOF)

7 Actuators

7.1 Manufacturer

Futaba S3003

7.2 Torque

3kg-cm

7.3 Speed

0.18seg/60°

7.4 Manufacturer

HITEC HS-5645MG

7.5 Torque

12kg-cm

7.6 Speed

0.18seg/60°

8 Sensors

8.1 Manufacturer model

Camera CMUCam2+ manufactured by CMU & Acroname Inc
Tilt Sensor model 5925
Six variable resistances of 10 kohms

8.2 Specification

Camera CMUCam2+
Resolution: Up to 160x255
Frame rate: Up to 50 Frames Per Second
Special optics: none

9 Processing boards

9.1 Manufacturer model

Made in home by us

9.2 Processor

1 microcontroller ATMEL 89C52

9.3 Speed

24 Mhz