Chico Interfaces

Tests

Who is Chico?

- Chico is a humanoid robot.
- Part of a European project.
- Used in 20 laboratories around the world.
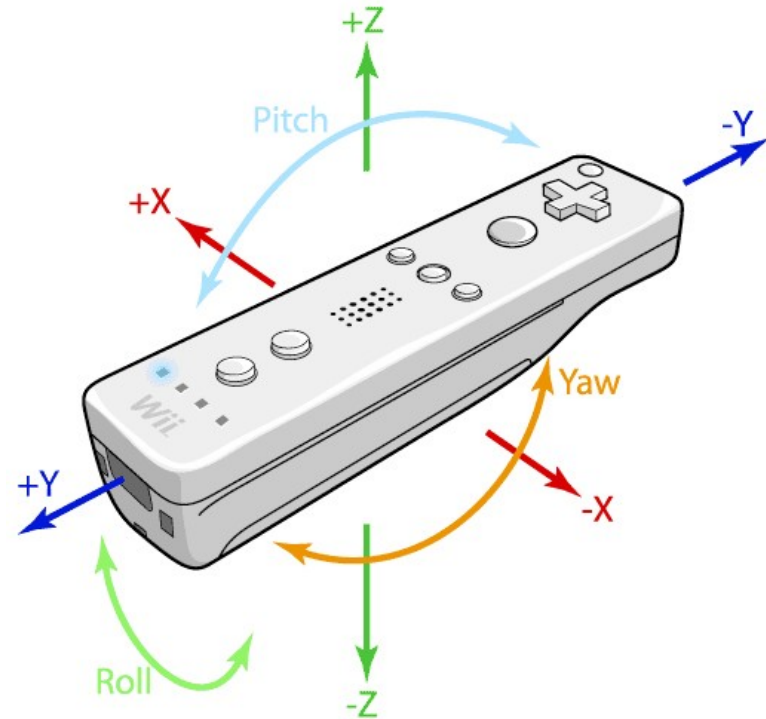 - Part of a European project.
- Inspired in a child.

What is the point of this

- Finishing my thesis work.

- Development of a simple interface for Chico.

- Helping people to use robots in a easy way.

- Tests to understand how:
  - The different interfaces compare.
  - How we can make it better.

How does it work?

- Two control systems:
  - Motor.
  - Kinetic.
- Computer GUI
- Kinect sensor interface
- Wii remote interface:
  - Angular movement (pitch/yaw/roll).
  - Buttons.
  - Motion Plus.

Tasks to perform

- Before starting each task, try the interface out. ☺

- Five tasks to perform (calmly):
    1. Play until you feel comfortable.
    2. Move up and down.
    3. Move left and right.
    4. Touch all the objects by the predefined order (1,2,3,4).
    5. Touch some of the objects by the predefined order, with an obstacle (4,1,2).
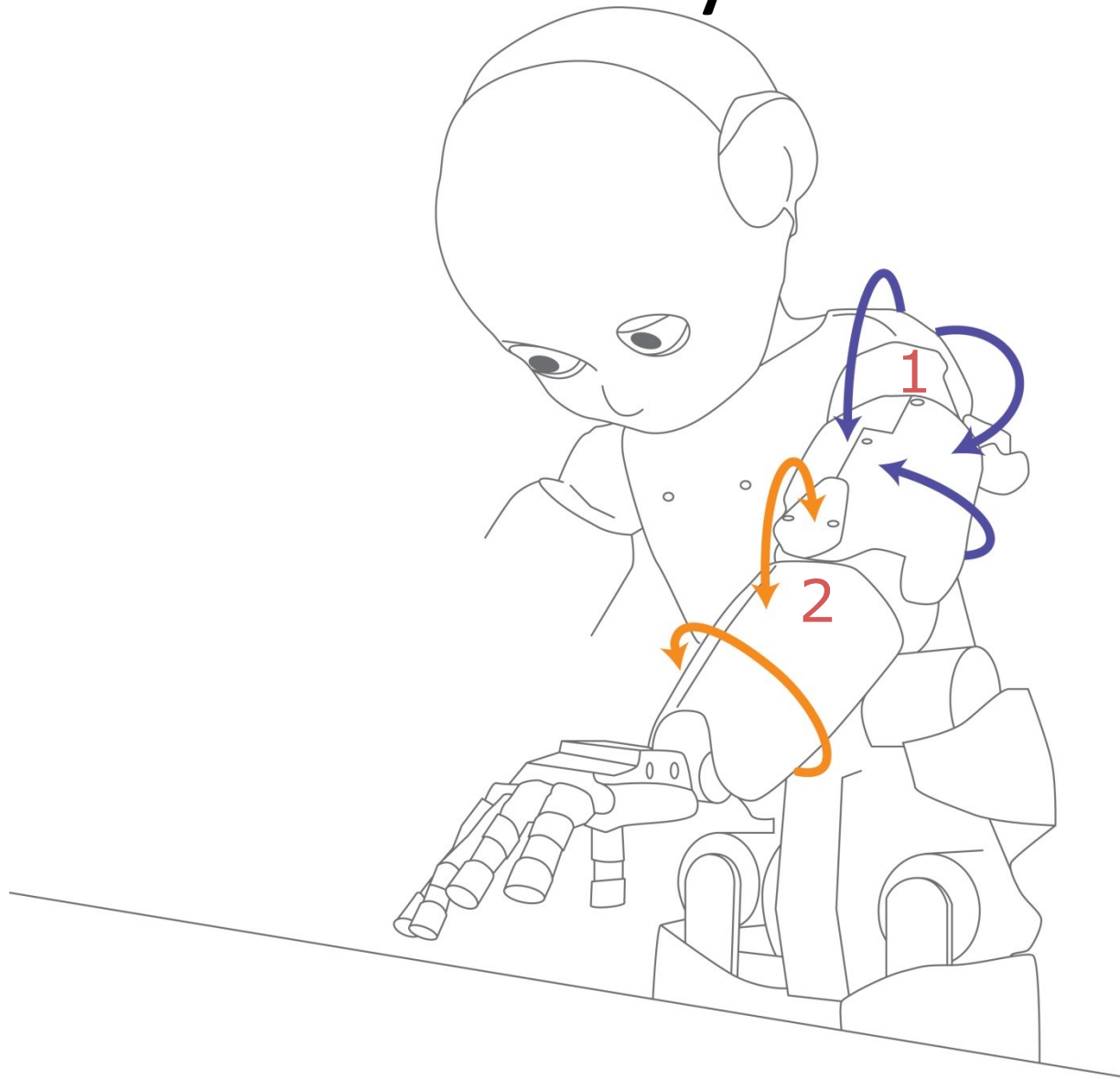
Computer Control

- Using a graphical interface to control Chico.
- Drag the sliders to move.
- Motors to control:
  - X,Y,Z.
- Be careful so the robot doesn't hit himself.
- Please do, complain and ask for help.

Motor System

- Metaphor: Holding a part of the arm.

- Each angular movement corresponds to a different joint motor.

- Buttons 1 and 2 change the

  motors you control.

- Button B, starts moving the robot.

- The robot only moves while you are moving.

- Please do, complain and ask for help.
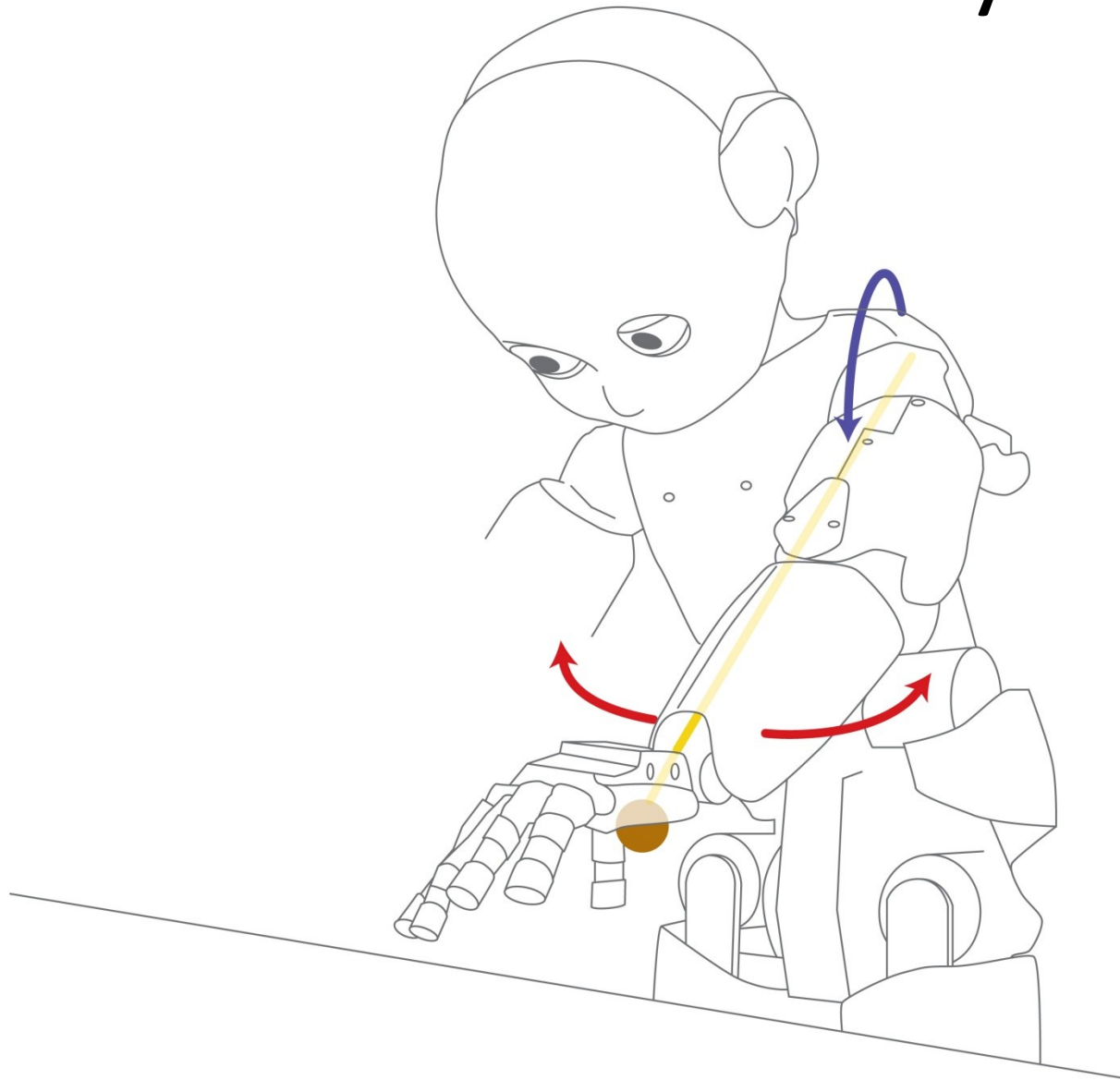
Motor System

Wiimote Kinematic System

- Metaphor: Chico follows a virtual point.
- Buttons:
  - 1 selects position control.
  - 2 selects orientation control.
  - +/- vary the distance of the hand from the body.
  - B starts moving the robot.
- The robot only moves while you are moving.
- Move slow.
- Please do, complain and ask for help.
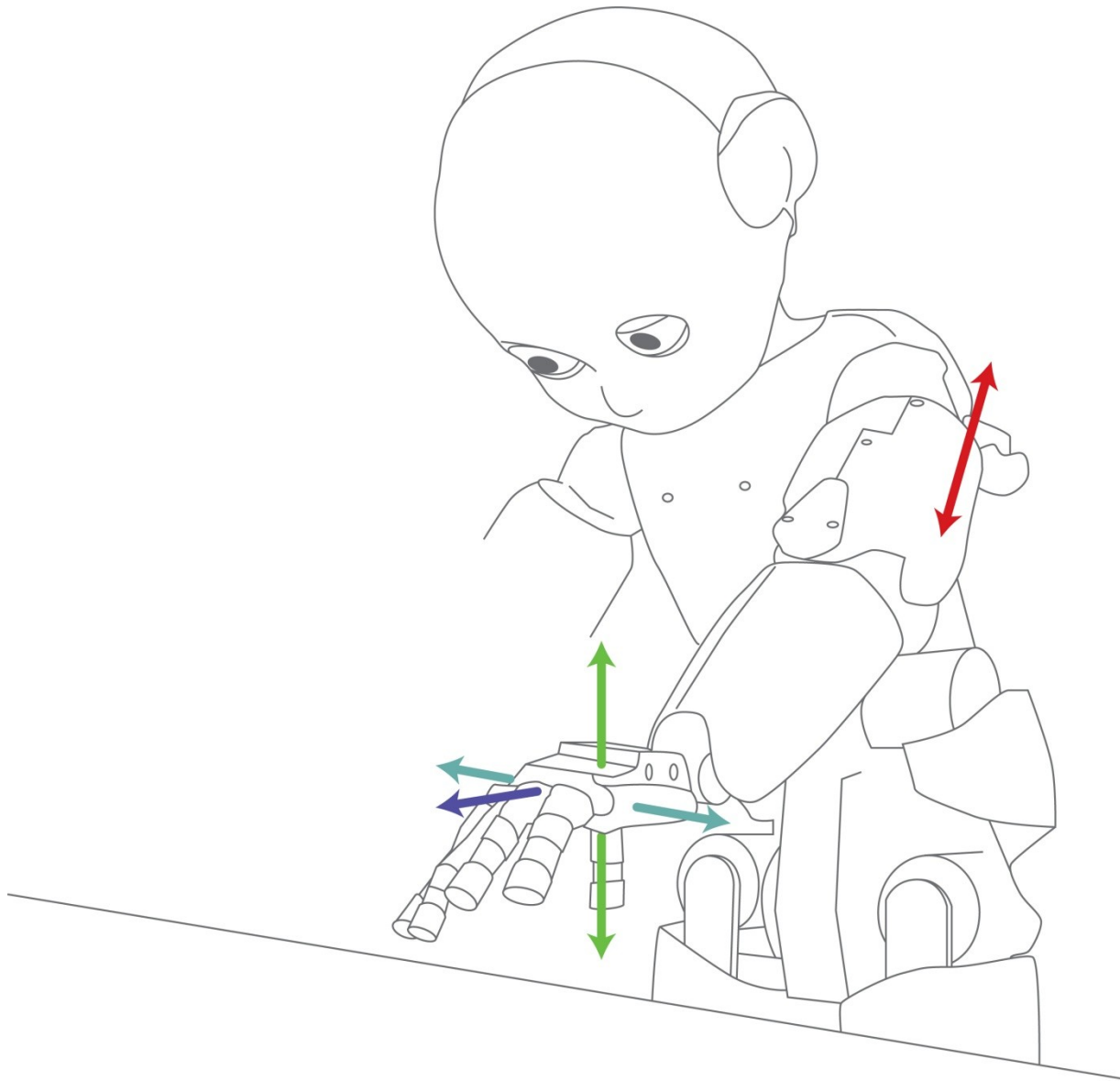
Wiimote Kinematic System

Wiimote Kinematic System

- Hand orientation extra task:
  - Try to put the hand accordingly to different orientations.
  - Palm up, down, right, left.
  - Wave.

Cursor control

- Chico hand moves according to the cursor.
- Cursor controls the hand horizontally.
- +/- controls the hand vertically.
- Please do, complain and ask for help.

Cursor control

Kinetic Sensor

Kinetic Sensor

- The wiimote controls when the kinect is on or off.

- This device has no buttons, you move your body, the robot follows you.

- Hand tracker and Skeleton tracker.

- Extra task:
  - Try to imitate three poses.

Questionnaire

- Please answer the questionnaire, and ask for help.

THANK YOU

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