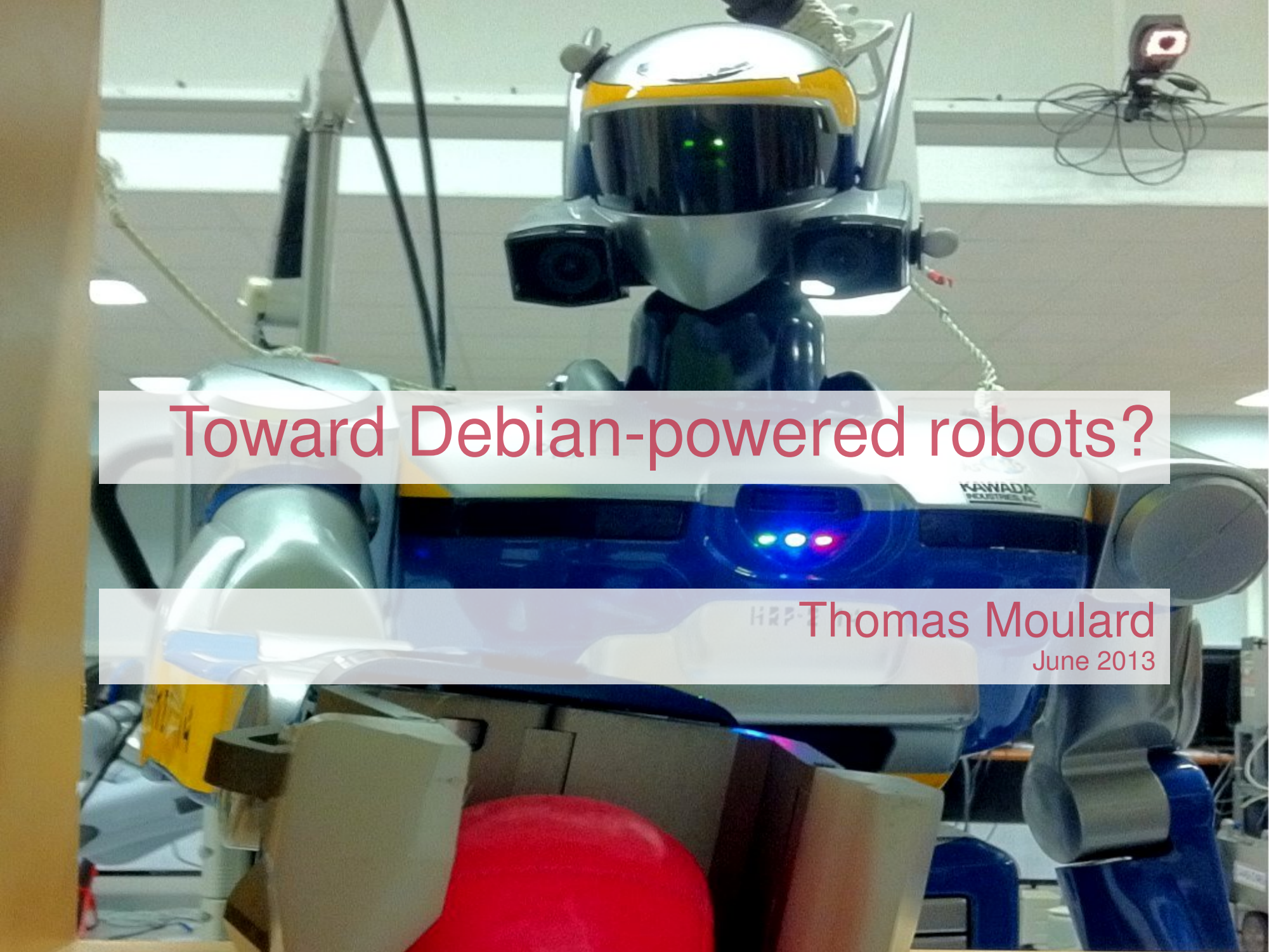
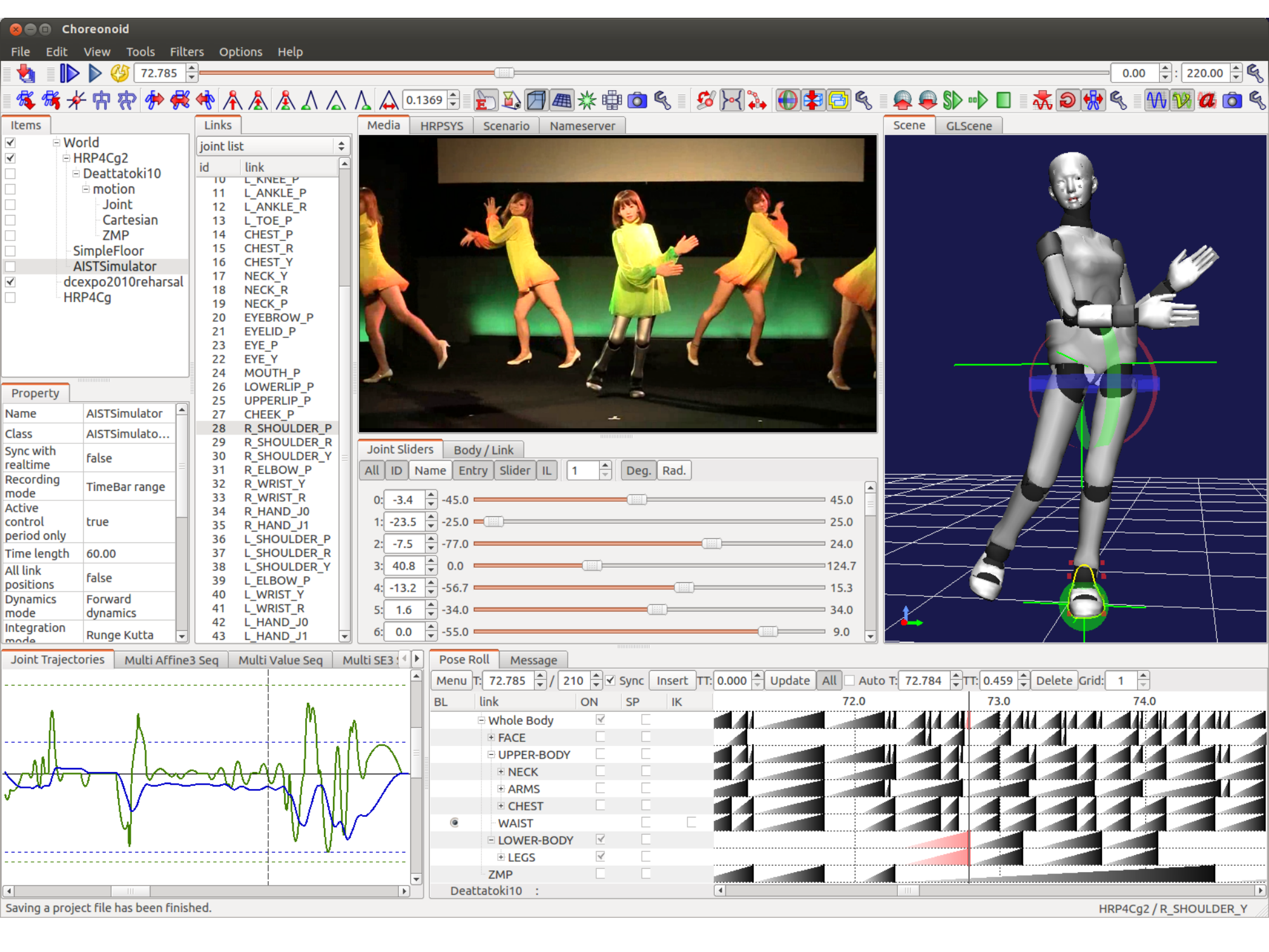


Toward Debian-powered robots?

Thomas Moulard

June 2013


Choreonoid
File Edit View Tools Filters Options Help
72.785
0.00 : 220.00
0.1369
Items
World
HRP4Cg2
Deattatoki10
motion
Joint
Cartesian
ZMP
SimpleFloor
AISTSimulator
dcexpo2010reharsal
HRP4Cg
Property
Name AISTSimulator
Class AISTSimulato...
Sync with realtime false
Recording mode TimeBar range
Active control period only true
Time length 60.00
All link positions false
Dynamics mode Forward dynamics
Integration mode Runge Kutta
Links
joint list
id link
11 L_ANKLE_P
12 L_ANKLE_R
13 L_TOE_P
14 CHEST_P
15 CHEST_R
16 CHEST_Y
17 NECK_Y
18 NECK_R
19 NECK_P
20 EYEBROW_P
21 EYELID_P
23 EYE_P
22 EYE_Y
24 MOUTH_P
26 LOWERLIP_P
25 UPPERLIP_P
27 CHEEK_P
28 R_SHOULDER_P
29 R_SHOULDER_R
30 R_SHOULDER_Y
31 R_ELBOW_P
32 R_WRIST_Y
33 R_WRIST_R
34 R_HAND_J0
35 R_HAND_J1
36 L_SHOULDER_P
37 L_SHOULDER_R
38 L_SHOULDER_Y
39 L_ELBOW_P
40 L_WRIST_Y
41 L_WRIST_R
42 L_HAND_J0
43 L_HAND_J1
Media HRPSYS Scenario Nameserver
Joint Sliders Body / Link
All ID Name Entry Slider IL 1 Deg. Rad.
0: -3.4 -45.0 45.0
1: -23.5 -25.0 25.0
2: -7.5 -77.0 24.0
3: 40.8 0.0 124.7
4: -13.2 -56.7 15.3
5: 1.6 -34.0 34.0
6: 0.0 -55.0 9.0
Scene GLScene
Joint Trajectories Multi Affine3 Seq Multi Value Seq Multi SE3
Pose Roll Message
Menu T: 72.785 / 210 Sync Insert TT: 0.000 Update All Auto T: 72.784 TT: 0.459 Delete Grid: 1
BL link ON SP IK
72.0 73.0 74.0
Whole Body
FACE
UPPER-BODY
NECK
ARMS
CHEST
WAIST
LOWER-BODY
LEGS
ZMP
Deattatoki10 :
Saving a project file has been finished.
HRP4Cg2 / R_SHOULDER_Y

Robotics software

Middlewares OpenRTM, ROS.

Simulators and development framework
Choreonoid, Gazebo, Morse, OpenHRP, OpenRAVE.

Development libraries OpenCV, PCL (Point Cloud Library), ViSP.

Some are ok but most of them lack Debian packaging.

Why does it matter?

- Robotics is promising.
- Most of the best tools are open-source.
- Robots may become day-to-day home/office appliance at some point. Or already are: Roomba!
- This is the time. The moment when “research projects” will become industrial platforms is *now*.

How can you help?

- Not all roboticists are open-source experts.
- Students and researchers need a working environment.
- Debian can *provide this*.

You can help by: packaging robotics software and reporting bugs on existing software.


PROMET 14
HRP-2