

TIAGo Training Sessions

Point Head

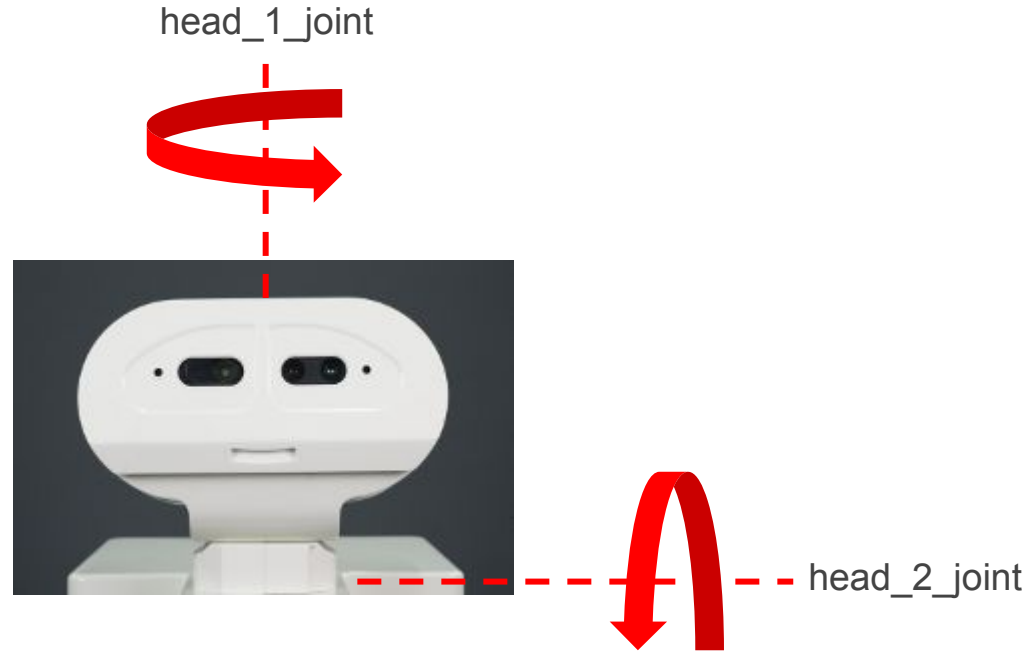


Introduction



Controlling the robot gaze

- The gaze of TIAGo is controlled by using the two motors of its neck, i.e. the two following joints:



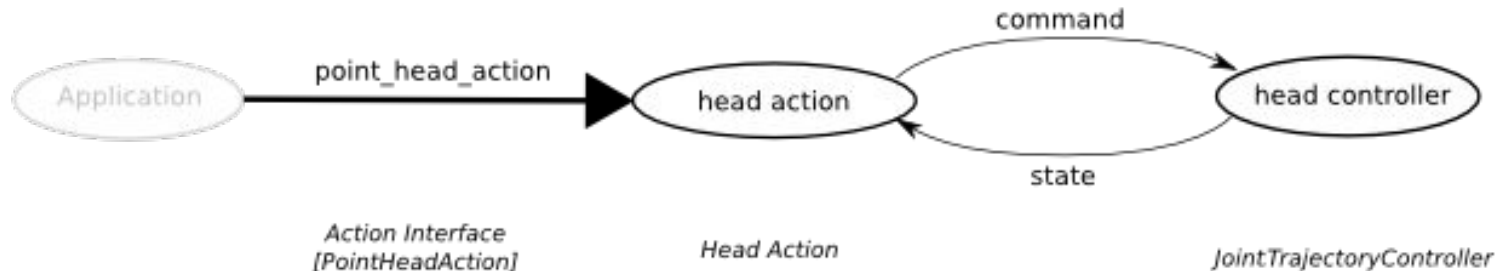
Point Head Action



Point Head Action

- Node that provides an **Action interface** for pointing the head towards a given point in the space

http://wiki.ros.org/head_action



Action message specification

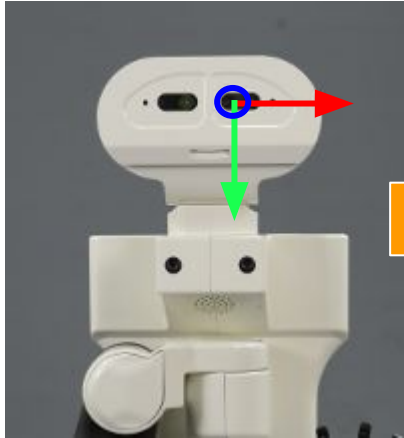
- Node that provides an **Action interface** for pointing the head towards a given point in the space:

/head_controller/point_head_action

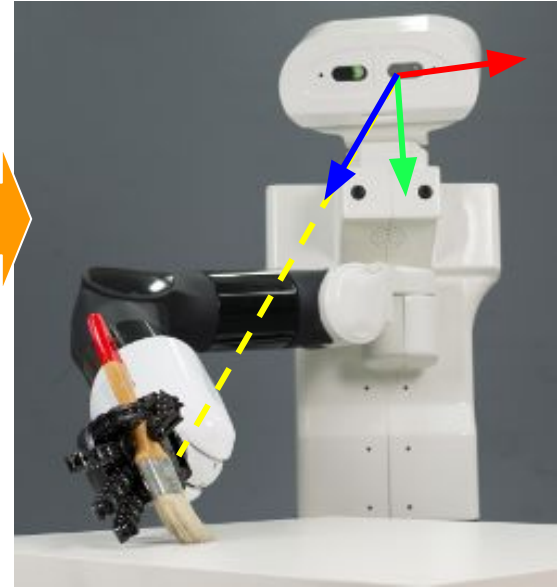
The action message type [control_msgs/PointHeadAction](#):

geometry_msgs/PointStamped target	→ Point to look at
geometry_msgs/Vector3 pointing_axis	→ Axis of the frame that has to be pointed towards the point
string pointing_frame	→ Frame in which the point and the axis are expressed wrt
duration min_duration	→ minimum time to reach the desired pose
float64 max_velocity	→ max velocity

Example



```
axcli /head_controller/point_head_action "target:  
header:  
  seq: 0  
  stamp: {secs: 0, nsecs: 0}  
  frame_id: '/xtion_rgb_optical_frame'  
  point: {x: 0.4, y: 0.3, z: 1.0}  
  pointing_axis: {x: 0.0, y: 0.0, z: 1.0}  
  pointing_frame: '/xtion_rgb_optical_frame'  
  min_duration: {secs: 1, nsecs: 0}  
  max_velocity: 0.25"
```



C++ Example

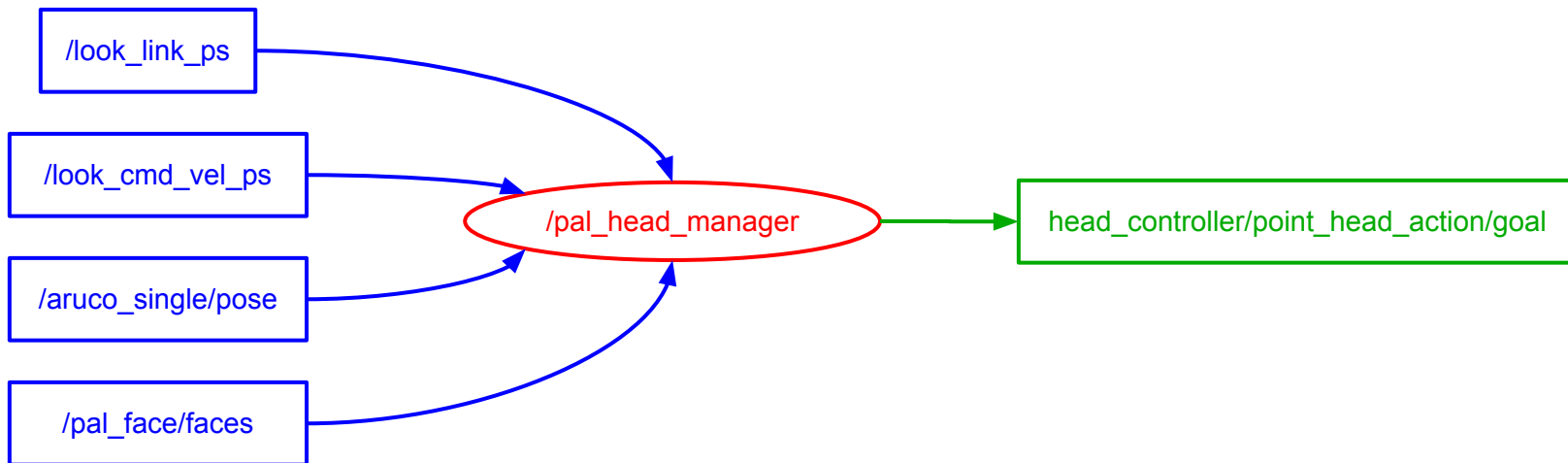
- Please refer to `tiago_tutorials/src/look_to_point.cpp`

Head manager



Head manager

- Node that controls the head direction taking different inputs into account



The node can be stopped in command line:

```
ssh pal@tiago-0c  
pal-stop head_manager
```

or using the Web commander:



● head_manager : Running



Questions?

