?

Programming for Mechatronic Systems Autumn 2017 41012-2017-AUTUMN-CITY | Discussion Board

Forum: Assignment 5 - Individual project Thread: ROS topics regarding transformation

Subscribe Search Refresh

Thread: ROS topics regarding transformation

Select: All None

Thread 4 of 14

Message Actions Expand All Collapse All

4 Posts in this Thread 0 Unread

Nicolas Giovanangeli 13 days ago

ROS topics regarding transformation

Overall Rating:

Hi,

I'm working on frontier exploration and I can identify frontiers from the OgMap image topic (/map_image/full) using a graph representation however this image shifts, to keep the robot position as its origin, causing the map to shift and therefore some of my highlighted frontiers on this image to shift as the robot moves. Are there any topics (or tf frames) I could use to apply transformation to acquire a global OgMap that doesn't shift around?

Thank you

Reply

Nicolas Giovanangeli 11 days ago

RE: ROS topics regarding transformation

Overall Rating:

I've addressed a bug in my code that was causing my frontiers to drift as the map image shifts to keep the local robot position at its origin, though will still welcome any guiding tips for transforming pixel coordinates of a graph into x,y coordinates

▲ Hide 2 replies

Yujun Lai 10 days ago

RE: ROS topics regarding transformation

Overall Rating:

Hi Nicolas, Wouldn't it be possible for you to clone a cv::Mat file which is your global

Hi Nicolas, Wouldn't it be possible for you to clone a cv::Mat file which is your global OGMap? The representation of your robot is a pose which has a point (x,y,z) [z you can keep constant as 0] and a quaternion [which has functions allowing you convert roll pitch yaw to quaternions and back]. The transform between your current robot pose and the centre of the global OGMap would be the transform you apply to convert from your graph coords to xy relative to global OG Map. (Might be worthwhile reviewing tf_conversions, in particular tf_eigen.h; and sensor_msgs::Pose) Do correct me if I am interpreting your problems incorrectly.

Reply Quote Email Author

▲ Hide 1 reply

Nicolas Giovanangeli 10 days ago

RE: ROS topics regarding transformation

Overall Rating:

I'm not sure I follow, which topic contains the global map? The only published OgMap topic seems to be the "map_image/full" which is local since the map is being moved relative to the robot. I'm having trouble linking this image to the physical map. So far conceptually I think I have to transform from the global image frame at [i,j] =[0,0] to the image center [i,j] = [rows/2,columns/2] but I get a little lost with what's been provided when converting pixels into meters [x,y] to get frontier positions relative to the robot and then from there transforming those coordinates relative to the global frame of the physical map for setting up target goal points.

Reply Quote Email Author

Select: All None

Message Actions Expand All Collapse All

← OK