

Follow me behavior (detection part)

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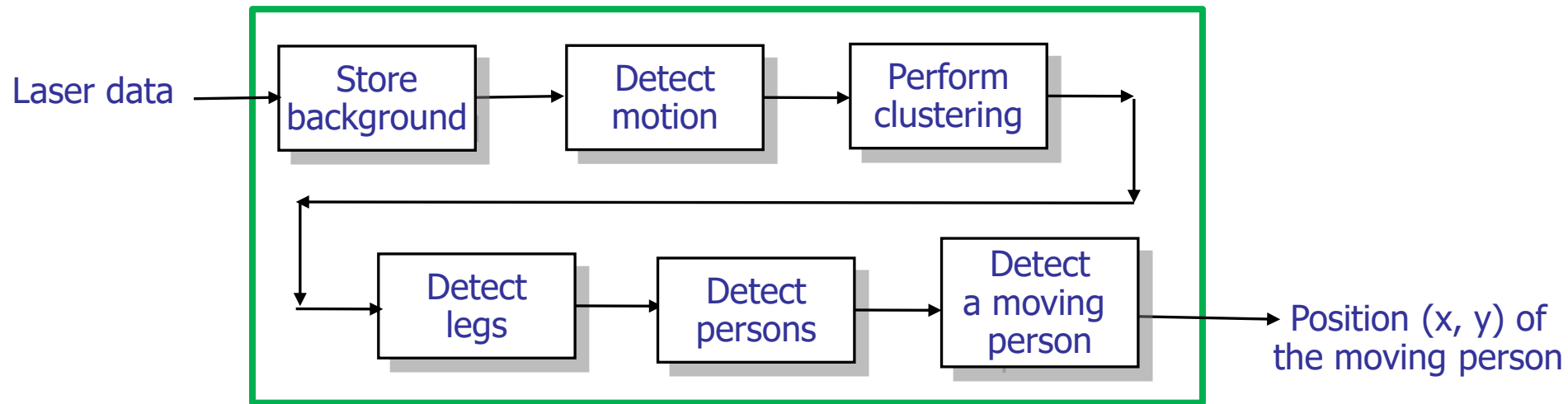
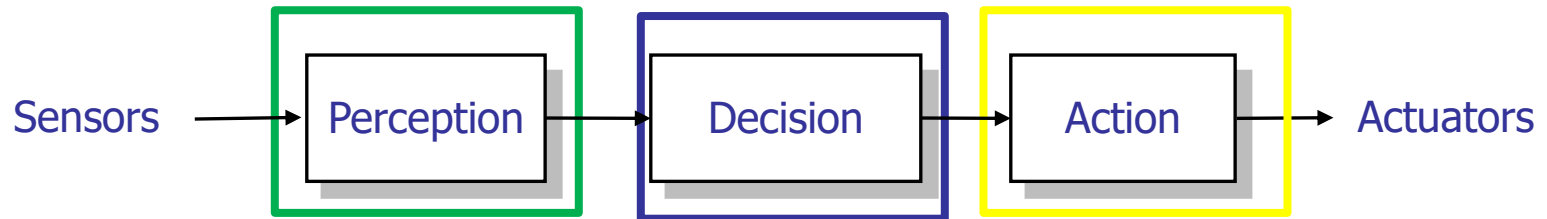
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Follow me behavior (perception part): definition (1/2)

- The goal of the lab is to implement the laser processing to detect a moving person;
- A moving person has:
 - Two legs that are moving;
 - Two legs with a maximum distance of 70cms between them;
 - A leg is a cluster with a size between 5cms and 25cms;
 - A moving cluster is a cluster that has at least 75% of its hits that are dynamic;
 - A moving person is a person with

Follow me behavior (perception part): definition (2/2)



- Each time, we receive new laser data, this process is done

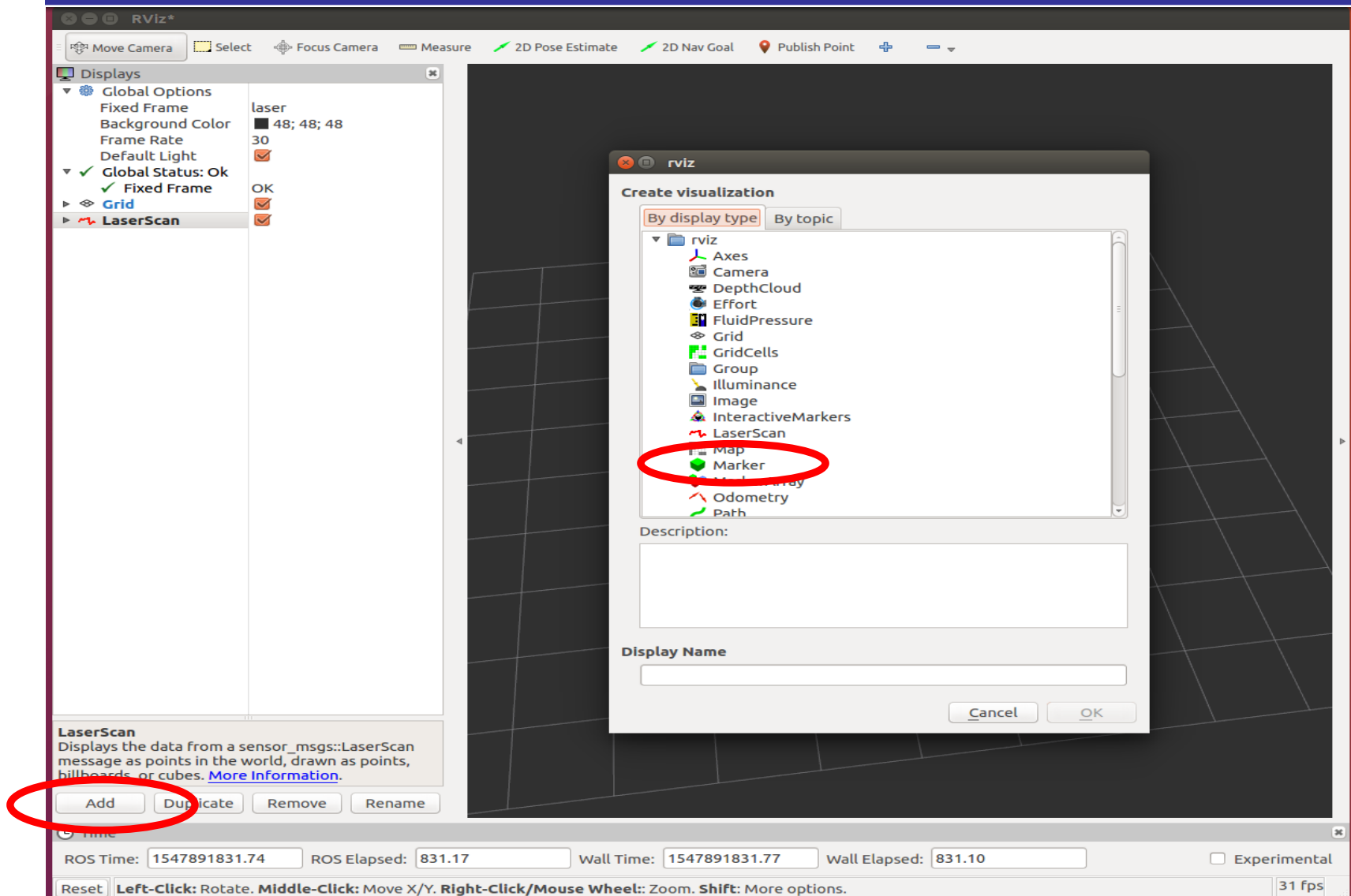
Follow me behavior (perception part): installation + implementation

1. In `~/catkin_ws/src/follow_me/src/datmo.cpp`: you have to implement the methods:
 1. Detect_motion (previously done);
 2. Perform_clustering (previously done);
 3. Detect_legs;
 4. Detect_persons;
 5. Detect_a_moving_person;
 6. Modify the method « update » to detect_motion only when robair doesnt move.
2. In `~/catkin_ws/src/follow_me/src/detection_node.cpp`: you have to check and understand the method update

Follow me behavior (perception part): tests(1/3)

- Open 5 terminals:
 1. Roscore: the ROS master;
 2. Rosbag play *data_file.bag*: to play a saved file;
 3. Rosrun follow_me *detection_node*;
 4. Rosrun follow_me *robot_moving_node*;
 - The laser data are only processed when the robot does not move;
 - This is automatically taken into account by the node *robot_moving_node*;
 - You do not have to take care about this issue.
 5. Rviz: the vizualization tool of ROS.
 - To have a graphical display of the processing;
 - See screenshots on next slides

Follow me behavior (perception part): tests(2/3)



Follow me behavior (perception part): tests(3/3)

