KBSW190929 SLAMWARE ROS SDK (cn)

ROSSLAMWARE SDK

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Get Started

SDK

ROS SDK

Slamware ROS SDK

docs	
src	
--slamware_ros_sdk	ROS SDK
--slamware_sdk	SDK

Ubuntu 16.04ROS

ROS SDKSlamwareIPslamware_ros_sdk_server_node

Hello World

1.

srccatkin_wscatkin

```
cd catkin_ws/srccatkin_init_workspace
```

2.

```
cd ..catkin_make
```

3.

```
source devel/setup.bash
```

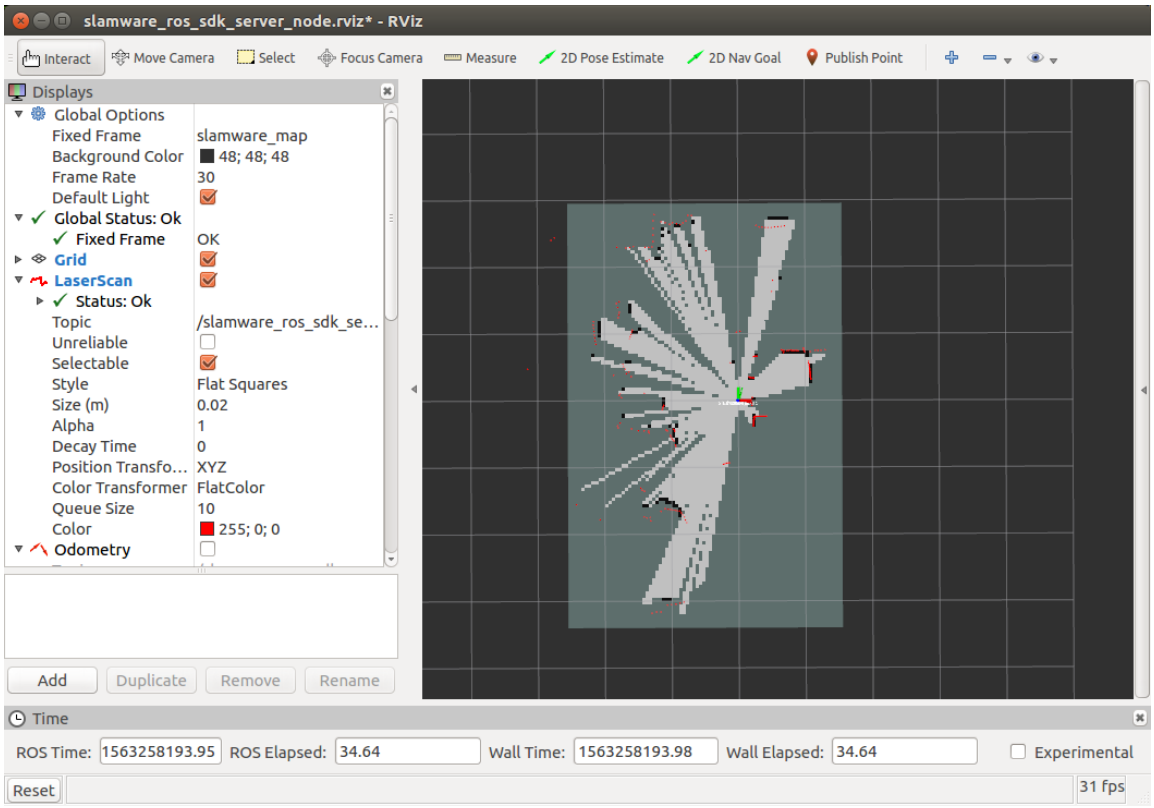
4.

APWIFI

```
roslaunch slamware_ros_sdk slamware_ros_sdk_server_node.launch ip_address:=192.168.11.1
```

rviz

```
roslaunch slamware_ros_sdk view_slamware_ros_sdk_server_node.launch
```



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slamware_ros_sdk_server_node	

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slamware_ros_sdk_server_node

slamware_ros_sdk_server_nodeSlamware

1.

/cmd_vel (geometry_msgs/Twist)

/move_base_simple/goal (geometry_msgs/PoseStamped)

Yaw

sync_map (slamware_ros_sdk/SyncMapRequest)

slamware_ros_sdk/SyncMapRequest

slamware_ros_sdk/msg/SyncMapRequest.msg

set_pose (geometry_msgs/Pose)

recover_localization (slamware_ros_sdk/RecoverLocalizationRequest)

slamware_ros_sdk/RecoverLocalizationRequest		
slamware_ros_sdk/msg/RecoverLocalizationRequest.msg		
area	slamware_ros_sdk/RectFlt32	
options	slamware_ros_sdk/LocalizationOptions	

slamware_ros_sdk/RectFlt32		
slamware_ros_sdk/msg/RectFlt32.msg		
x	float32	x
y	float32	y
w	float32	
h	float32	

slamware_ros_sdk/LocalizationOptions		
slamware_ros_sdk/msg/LocalizationOptions.msg		
max_time_ms	slamware_ros_sdk/OptionalInt32	
mvmt_type	slamware_ros_sdk/OptionalLocalizationMovement	

slamware_ros_sdk/OptionalInt32

slamware_ros_sdk/msg/OptionalInt32.msg		
is_valid	bool	value
value	int32	

slamware_ros_sdk/OptionalLocalizationMovement		
slamware_ros_sdk/msg/OptionalLocalizationMovement.msg		
is_valid	bool	value
value	slamware_ros_sdk/LocalizationMovement	

slamware_ros_sdk/LocalizationMovement		
slamware_ros_sdk/msg/LocalizationMovement.msg		
type	int8	=-1=0 =1=2

clear_map (slamware_ros_sdk/ClearMapRequest)

slamware_ros_sdk/ClearMapRequest		
slamware_ros_sdk/msg/ClearMapRequest.msg		
kind	slamware_ros_sdk/MapKind	

slamware_ros_sdk/MapKind		
slamware_ros_sdk/msg/MapKind.msg		
kind	int8	=-1EXPLORERMAP=0...

set_map_update (slamware_ros_sdk/SetMapUpdateRequest)

slamware_ros_sdk/SetMapUpdateRequest		
slamware_ros_sdk/msg/SetMapUpdateRequest.msg		
enabled	bool	
kind	slamware_ros_sdk/MapKind	

slamware_ros_sdk/MapKind		
slamware_ros_sdk/msg/MapKind.msg		
kind	int8	=-1EXPLORERMAP=0...

set_map_localization (slamware_ros_sdk/SetMapLocalizationRequest)

slamware_ros_sdk/SetMapLocalizationRequest		
slamware_ros_sdk/msg/SetMapLocalizationRequest.msg		
enabled	bool	

move_by_direction (slamware_ros_sdk/MoveByDirectionRequest)

slamware_ros_sdk/MoveByDirectionRequest		
slamware_ros_sdk/msg/MoveByDirectionRequest.msg		
direction	slamware_ros_sdk/ActionDirection	
options	slamware_ros_sdk/MoveOptions	

slamware_ros_sdk/ActionDirection
slamware_ros_sdk/msg/ActionDirection.msg

direction	int8	=-1=0 =1=2=3

slamware_ros_sdk/MoveOptions		
slamware_ros_sdk/msg/MoveOptions.msg		
opt_flags	slamware_ros_sdk/MoveOptionFlag	
speed_ratio	slamware_ros_sdk/OptionalFlt64	

slamware_ros_sdk/MoveOptionFlag		
slamware_ros_sdk/msg/MoveOptionFlag.msg		
flags	uint32	
NONE	0x00000000	
APPENDING	0x00000001	
MILESTONE	0x00000002	
NO_SMOOTH	0x00000004	
KEY_POINTS	0x00000008	
PRECISE	0x00000010	
WITH_YAW	0x00000020	
RETURN_UNREACHABLE_DIRECTLY	0x00000040	
KEY_POINTS_WITH_OA	0x00000080	

slamware_ros_sdk/OptionalFlt64		
slamware_ros_sdk/msg/OptionalFlt64.msg		
is_valid	bool	value
value	float64	

move_by_theta (slamware_ros_sdk/MoveByThetaRequest)

slamware_ros_sdk/MoveByThetaRequest		
slamware_ros_sdk/msg/MoveByThetaRequest.msg		
theta	float32	
options	slamware_ros_sdk/MoveOptions	

slamware_ros_sdk/MoveOptions		
slamware_ros_sdk/msg/MoveOptions.msg		
opt_flags	slamware_ros_sdk/MoveOptionFlag	
speed_ratio	slamware_ros_sdk/OptionalFlt64	

slamware_ros_sdk/MoveOptionFlag		
slamware_ros_sdk/msg/MoveOptionFlag.msg		
flags	uint32	
NONE	0x00000000	
APPENDING	0x00000001	
MILESTONE	0x00000002	
NO_SMOOTH	0x00000004	
KEY_POINTS	0x00000008	
PRECISE	0x00000010	
WITH_YAW	0x00000020	
RETURN_UNREACHABLE_DIRECTLY	0x00000040	
KEY_POINTS_WITH_OA	0x00000080	

slamware_ros_sdk/OptionalFlt64		
slamware_ros_sdk/msg/OptionalFlt64.msg		

is_valid	bool	value
value	float64	

move_to (slamware_ros_sdk/MoveToRequest)

slamware_ros_sdk/MoveToRequest		
slamware_ros_sdk/msg/MoveToRequest.msg		
location	geometry_msgs/Point	
options	slamware_ros_sdk/MoveOptions	
yaw	float32	

slamware_ros_sdk/MoveOptions		
slamware_ros_sdk/msg/MoveOptions.msg		
opt_flags	slamware_ros_sdk/MoveOptionFlag	
speed_ratio	slamware_ros_sdk/OptionalFlt64	

slamware_ros_sdk/MoveOptionFlag		
slamware_ros_sdk/msg/MoveOptionFlag.msg		
flags	uint32	
NONE	0x00000000	
APPENDING	0x00000001	
MILESTONE	0x00000002	
NO_SMOOTH	0x00000004	
KEY_POINTS	0x00000008	
PRECISE	0x00000010	
WITH_YAW	0x00000020	
RETURN_UNREACHABLE_DIRECTLY	0x00000040	
KEY_POINTS_WITH_OA	0x00000080	

slamware_ros_sdk/OptionalFlt64		
slamware_ros_sdk/msg/OptionalFlt64.msg		
is_valid	bool	value
value	float64	

move_to_locations (slamware_ros_sdk/MoveToLocationsRequest)

slamware_ros_sdk/MoveToLocationsRequest		
slamware_ros_sdk/msg/MoveToLocationsRequest.msg		
locations	geometry_msgs/Point[]	
options	slamware_ros_sdk/MoveOptions	
yaw	float32	

slamware_ros_sdk/MoveOptions		
slamware_ros_sdk/msg/MoveOptions.msg		
opt_flags	slamware_ros_sdk/MoveOptionFlag	
speed_ratio	slamware_ros_sdk/OptionalFlt64	

slamware_ros_sdk/MoveOptionFlag		
slamware_ros_sdk/msg/MoveOptionFlag.msg		
flags	uint32	
NONE	0x00000000	
APPENDING	0x00000001	
MILESTONE	0x00000002	
NO_SMOOTH	0x00000004	

KEY_POINTS	0x00000008	
PRECISE	0x00000010	
WITH_YAW	0x00000020	
RETURN_UNREACHABLE_DIRECTLY	0x00000040	
KEY_POINTS_WITH_OA	0x00000080	

slamware_ros_sdk/OptionalFlt64		
slamware_ros_sdk/msg/OptionalFlt64.msg		
is_valid	bool	value
value	float64	

rotate_to (slamware_ros_sdk/RotateToRequest)

slamware_ros_sdk/RotateToRequest		
slamware_ros_sdk/msg/RotateToRequest.msg		
orientation	geometry_msgs/Quaternion	
options	slamware_ros_sdk/MoveOptions	

slamware_ros_sdk/MoveOptions		
slamware_ros_sdk/msg/MoveOptions.msg		
opt_flags	slamware_ros_sdk/MoveOptionFlag	
speed_ratio	slamware_ros_sdk/OptionalFlt64	

slamware_ros_sdk/MoveOptionFlag		
slamware_ros_sdk/msg/MoveOptionFlag.msg		
flags	uint32	

NONE	0x00000000	
APPENDING	0x00000001	
MILESTONE	0x00000002	
NO_SMOOTH	0x00000004	
KEY_POINTS	0x00000008	
PRECISE	0x00000010	
WITH_YAW	0x00000020	
RETURN_UNREACHABLE_DIRECTLY	0x00000040	
KEY_POINTS_WITH_OA	0x00000080	

slamware_ros_sdk/OptionalFlt64		
slamware_ros_sdk/msg/OptionalFlt64.msg		
is_valid	bool	value
value	float64	

rotate (slamware_ros_sdk/RotateRequest)

slamware_ros_sdk/RotateRequest		
slamware_ros_sdk/msg/RotateRequest.msg		
orientation	geometry_msgs/Quaternion	
options	slamware_ros_sdk/MoveOptions	

slamware_ros_sdk/MoveOptions		
slamware_ros_sdk/msg/MoveOptions.msg		
opt_flags	slamware_ros_sdk/MoveOptionFlag	
speed_ratio	slamware_ros_sdk/OptionalFlt64	

slamware_ros_sdk/MoveOptionFlag
slamware_ros_sdk/msg/MoveOptionFlag.msg

flags	uint32	
NONE	0x00000000	
APPENDING	0x00000001	
MILESTONE	0x00000002	
NO_SMOOTH	0x00000004	
KEY_POINTS	0x00000008	
PRECISE	0x00000010	
WITH_YAW	0x00000020	
RETURN_UNREACHABLE_DIRECTLY	0x00000040	
KEY_POINTS_WITH_OA	0x00000080	

slamware_ros_sdk/OptionalFlt64		
slamware_ros_sdk/msg/OptionalFlt64.msg		
is_valid	bool	value
value	float64	

go_home (slamware_ros_sdk/GoHomeRequest)

slamware_ros_sdk/GoHomeRequest
slamware_ros_sdk/msg/GoHomeRequest.msg

cancel_action (slamware_ros_sdk/CancelActionRequest)

slamware_ros_sdk/CancelActionRequest
slamware_ros_sdk/msg/CancelActionRequest.msg

add_line (slamware_ros_sdk/AddLineRequest)

slamware_ros_sdk/AddLineRequest		
slamware_ros_sdk/msg/AddLineRequest.msg		
usage	slamware_ros_sdk/ArtifactUsage	
line	slamware_ros_sdk/Line2DFlt32	

slamware_ros_sdk/ArtifactUsage		
slamware_ros_sdk/msg/ArtifactUsage.msg		
usage	int8	=-1=0 =1

slamware_ros_sdk/Line2DFlt32		
slamware_ros_sdk/msg/Line2DFlt32.msg		
id	uint32	id
start	slamware_ros_sdk/Vec2DFlt32	
end	slamware_ros_sdk/Vec2DFlt32	

slamware_ros_sdk/Vec2DFlt32		
slamware_ros_sdk/msg/Vec2DFlt32.msg		
x	float32	x
y	float32	y

add_lines (slamware_ros_sdk/AddLinesRequest)

slamware_ros_sdk/AddLinesRequest
slamware_ros_sdk/msg/AddLinesRequest.msg

usage	slamware_ros_sdk/ArtifactUsage	
line	slamware_ros_sdk/Line2DFlt32[]	

slamware_ros_sdk/ArtifactUsage		
slamware_ros_sdk/msg/ArtifactUsage.msg		
usage	int8	=-1=0 =1

slamware_ros_sdk/Line2DFlt32		
slamware_ros_sdk/msg/Line2DFlt32.msg		
id	uint32	id
start	slamware_ros_sdk/Vec2DFlt32	
end	slamware_ros_sdk/Vec2DFlt32	

slamware_ros_sdk/Vec2DFlt32		
slamware_ros_sdk/msg/Vec2DFlt32.msg		
x	float32	x
y	float32	y

remove_line (slamware_ros_sdk/RemoveLineRequest)

slamware_ros_sdk/RemoveLineRequest		
slamware_ros_sdk/msg/RemoveLineRequest.msg		
usage	slamware_ros_sdk/ArtifactUsage	
id	uint32	id

slamware_ros_sdk/ArtifactUsage		
slamware_ros_sdk/msg/ArtifactUsage.msg		
usage	int8	=-1=0 =1

clear_lines (slamware_ros_sdk/ClearLinesRequest)

slamware_ros_sdk/ClearLinesRequest		
slamware_ros_sdk/msg/ClearLinesRequest.msg		
usage	slamware_ros_sdk/ArtifactUsage	

slamware_ros_sdk/ArtifactUsage		
slamware_ros_sdk/msg/ArtifactUsage.msg		
usage	int8	=-1=0 =1

move_line (slamware_ros_sdk/MoveLineRequest)

slamware_ros_sdk/MoveLineRequest		
slamware_ros_sdk/msg/MoveLineRequest.msg		
usage	slamware_ros_sdk/ArtifactUsage	
line	slamware_ros_sdk/Line2DFlt32	

slamware_ros_sdk/ArtifactUsage		
slamware_ros_sdk/msg/ArtifactUsage.msg		

usage	int8	=-1=0 =1

slamware_ros_sdk/Line2DFlt32		
slamware_ros_sdk/msg/Line2DFlt32.msg		
id	uint32	id
start	slamware_ros_sdk/Vec2DFlt32	
end	slamware_ros_sdk/Vec2DFlt32	

slamware_ros_sdk/Vec2DFlt32		
slamware_ros_sdk/msg/Vec2DFlt32.msg		
x	float32	x
y	float32	y

move_lines (slamware_ros_sdk/MoveLinesRequest)

slamware_ros_sdk/MoveLinesRequest		
slamware_ros_sdk/msg/MoveLinesRequest.msg		
usage	slamware_ros_sdk/ArtifactUsage	
line	slamware_ros_sdk/Line2DFlt32[]	

slamware_ros_sdk/ArtifactUsage		
slamware_ros_sdk/msg/ArtifactUsage.msg		
usage	int8	=-1=0 =1

slamware_ros_sdk/Line2DFlt32
slamware_ros_sdk/msg/Line2DFlt32.msg

id	uint32	id
start	slamware_ros_sdk/Vec2DFlt32	
end	slamware_ros_sdk/Vec2DFlt32	

slamware_ros_sdk/Vec2DFlt32		
slamware_ros_sdk/msg/Vec2DFlt32.msg		
x	float32	x
y	float32	y

2.

scan (sensor_msgs/LaserScan)

odom (nav_msgs/Odometry)

map_metadata (nav_msgs/MapMetaData)

map (nav_msgs/OccupancyGrid)

basic_sensors_info (slamware_ros_sdk/BasicSensorInfoArray)

id/

slamware_ros_sdk/BasicSensorInfoArray		
slamware_ros_sdk/msg/BasicSensorInfoArray.msg		
sensors_info	slamware_ros_sdk/BasicSensorInfo[]	

slamware_ros_sdk/BasicSensorInfo

slamware_ros_sdk/msg/BasicSensorInfo.msg		
id	int32	id
sensor_type	slamware_ros_sdk/SensorType	
impact_type	slamware_ros_sdk/ImpactType	/
install_pose	geometry_msgs/Pose	
refresh_freq	float32	

slamware_ros_sdk/SensorType		
slamware_ros_sdk/msg/SensorType.msg		
type	int8	=-1=0=1=2=3=4=5

slamware_ros_sdk/ImpactType		
slamware_ros_sdk/msg/ImpactType.msg		
type	int8	=-1=0=1

basic_sensors_values (slamware_ros_sdk/BasicSensorValueDataArray)

slamware_ros_sdk/BasicSensorValueDataArray		
slamware_ros_sdk/msg/BasicSensorValueDataArray.msg		
values_data	slamware_ros_sdk/BasicSensorValueData[]	

slamware_ros_sdk/BasicSensorValueData		
slamware_ros_sdk/msg/BasicSensorValueData.msg		
info	slamware_ros_sdk/BasicSensorInfo	

value	slamware_ros_sdk/BasicSensorValue	

slamware_ros_sdk/BasicSensorValue		
slamware_ros_sdk/msg/BasicSensorValue.msg		
is_in_impact	bool	
value	float32	

slamware_ros_sdk/BasicSensorInfo		
slamware_ros_sdk/msg/BasicSensorInfo.msg		
id	int32	id
sensor_type	slamware_ros_sdk/SensorType	
impact_type	slamware_ros_sdk/ImpactType	/
install_pose	geometry_msgs/Pose	
refresh_freq	float32	

slamware_ros_sdk/SensorType		
slamware_ros_sdk/msg/SensorType.msg		
type	int8	=-1=0=1=2=3=4=5

slamware_ros_sdk/ImpactType		
slamware_ros_sdk/msg/ImpactType.msg		
type	int8	=-1=0=1

global_plan_path (nav_msgs/Path)

robot_basic_state (slamware_ros_sdk/RobotBasicState)

slamware_ros_sdk/RobotBasicState		
slamware_ros_sdk/msg/RobotBasicState.msg		
is_map_building_enabled	bool	
is_localization_enabled	bool	
localization_quality	int32	
board_temperature	int32	
battery_percentage	int32	
is_dc_in	bool	
is_charging	bool	

virtual_walls (slamware_ros_sdk/Line2DFlt32Array)

slamware_ros_sdk/Line2DFlt32Array		
slamware_ros_sdk/msg/Line2DFlt32Array.msg		
lines	slamware_ros_sdk/Line2DFlt32[]	

slamware_ros_sdk/Line2DFlt32		
slamware_ros_sdk/msg/Line2DFlt32.msg		
id	uint32	id
start	slamware_ros_sdk/Vec2DFlt32	
end	slamware_ros_sdk/Vec2DFlt32	

slamware_ros_sdk/Vec2DFlt32		
slamware_ros_sdk/msg/Vec2DFlt32.msg		

x	float32	x
y	float32	y

virtual_tracks (slamware_ros_sdk/Line2DFlt32Array)

slamware_ros_sdk/Line2DFlt32Array		
slamware_ros_sdk/msg/Line2DFlt32Array.msg		
lines	slamware_ros_sdk/Line2DFlt32[]	

slamware_ros_sdk/Line2DFlt32		
slamware_ros_sdk/msg/Line2DFlt32.msg		
id	uint32	id
start	slamware_ros_sdk/Vec2DFlt32	
end	slamware_ros_sdk/Vec2DFlt32	

slamware_ros_sdk/Vec2DFlt32		
slamware_ros_sdk/msg/Vec2DFlt32.msg		
x	float32	x
y	float32	y

3.

sync_get_stcm (slamware_ros_sdk/SyncGetStcm)

stcm

slamware_ros_sdk/SyncGetStcm
slamware_ros_sdk/srv/SyncGetStcm.srv

raw_stcm	int8[]	stcm

sync_set_stcm (slamware_ros_sdk/SyncSetStcm)

stcm

slamware_ros_sdk/SyncSetStcm		
slamware_ros_sdk/srv/SyncGetStcm.srv		
raw_stcm	int8[]	stcm
robot_pose	geometry_msgs/Pose	

4.

ip_address	string	"192.168.11.1"	IP
robot_port	int	1445	
reconn_wait_ms	uint	3000	
angle_compensate	bool	true	
fixed_odom_map_tf	bool	true	
robot_frame	string	"/base_link"	
laser_frame	string	"/laser"	
odom_frame	string	"/odom"	
map_frame	string	"/map"	
robot_pose_pub_period	float	0.05	
scan_pub_period	float	0.1	
map_update_period	float	0.2	
map_pub_period	float	0.2	
basic_sensors_info_update_period	float	7.0	
basic_sensors_values_pub_period	float	0.05	
path_pub_period	float	0.05	
robot_basic_state_pub_period	float	1.0	
virtual_walls_pub_period	float	0.5	
virtual_tracks_pub_period	float	0.5	
map_sync_once_get_max_wh	float	100.0	
map_update_near_robot_half_wh	float	8.0	
scan_topic	string	"scan"	
odom_topic	string	"odom"	

map_topic	string	"map"	
map_info_topic	string	"map_metadata"	
basic_sensors_info_topic	string	"basic_sensors_info"	
basic_sensors_values_topic	string	"basic_sensors_values"	
path_topic	string	"global_plan_path"	
vel_control_topic	string	"/cmd_vel"	
goal_topic	string	"/move_base_simple/goal"	

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5. tf

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6. tf

laser -> map

base_link -> odom

odom -> map