tf_test

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1.1 File List

Here is a list of all files with brief descriptions:

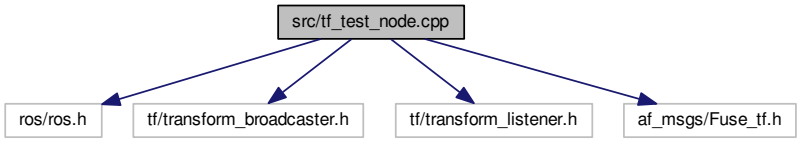
Chapter 2

File Documentation

2.1 src/tf_test_node.cpp File Reference

```
#include <ros/ros.h>
#include <tf/transform_broadcaster.h>
#include <tf/transform_listener.h>
#include <af_msgs/Fuse_tf.h>
```

Include dependency graph for tf_test_node.cpp:



Functions

- void tfCallback (const af_msgs::Fuse_tf &fuse_tf_msg)
- int main (int argc, char **argv)

Variables

- tf::Transform map_to_odom_ = tf::Transform(tf::createQuaternionFromRPY(0, 0, 0), tf::Vector3(0.0, 0.0, 0.0))

  *map->odom*全局变量

2.1.1 Function Documentation

2.1.1.1 main()

```
int main (
              int argc,
              char ** argv )
```

main函数

将接收到的数据转换为map->odom的tf发布出来

```
32                                {
33     ros::init(argc, argv, "my_tf_broadcaster");
34     ros::NodeHandle node;
35     ros::Subscriber sub = node.subscribe("/fuse/tf", 1, &tfCallback);
36     static tf::TransformBroadcaster br;
37     ros::Rate rate(10.0);
38     while (node.ok()){
39         br.sendTransform(tf::StampedTransform (map_to_odom_, ros::Time::now(), "map", "odom"));
40         ros::spinOnce();
41         rate.sleep();
42     }
43     return 0;
44 };
```

2.1.1.2 tfCallback()

```
void tfCallback (
              const af_msgs::Fuse_tf & fuse_tf_msg )
```

fuse/tf 回调函数

topic /fuse/tf 回调过程中调用,并且将fuse_tf_msg分解为map->base和odom->base两组数据,转换为map->odom并传递到main函数循环中

Parameters

fuse_tf_msg	自定义Fuse_tf格式数据

Returns

无返回值

Note

临时解决方案

```
18                                                {
19     tf::Transform laser_to_map = tf::Transform(tf::createQuaternionFromRPY(0, 0, fuse_tf_msg.map_theta),
       tf::Vector3(fuse_tf_msg.map_x, fuse_tf_msg.map_y, 0.0)).inverse();
20     tf::Transform odom_to_laser = tf::Transform(tf::createQuaternionFromRPY(0, 0, fuse_tf_msg.odom_theta),
       tf::Vector3(fuse_tf_msg.odom_x, fuse_tf_msg.odom_y, 0.0));
21
22     map_to_odom_ = (odom_to_laser * laser_to_map).inverse();
23     //map_to_odom_ = tf::Transform(tf::createQuaternionFromRPY(0, 0, 0), tf::Vector3(0.0, 0.0, 0.0));
24     ROS_INFO("x=%f,y=%f",map_to_odom_.getOrigin().getX(),
       map_to_odom_.getOrigin().getY());
25       ROS_INFO("processing tf");
26 }
```

2.1.2 Variable Documentation

2.1.2.1 map_to_odom_

```
tf::Transform map_to_odom_ = tf::Transform(tf::createQuaternionFromRPY(0, 0, 0), tf::Vector3(0.↩
0, 0.0, 0.0))
```

map->odom全局变量

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