1、Multi-robot synchronous control

1.1、Achieve effect

When you have two or more transbot robots, after starting the multi-vehicle control function, you can control all the transbot robots at the same time.

1.2、Preparation

Before enabling this function, it is necessary to enable distributed communication between the virtual machine and the transbot robot. Let the transbot be the slave and the virtual machine as the host.

At this time, the keyboard or handle control code is on the virtual machine, which is equivalent to the virtual machine being the central commander. Below we use two transbot robots as examples to demonstrate this function.

1.3、Start up

1.3.1、Virtual machine side

1）、Start up roscore

```
roscore
```

2）、Start the keyboard/handle control node

keyboard

```
roslaunch transbot_ctrl transbot_keyboard.launch
```

handle

```
roslaunch transbot_ctrl transbot_joy_multi.launch
```

1.3.2、transbot side

1）、transbot1 starts the robot control code

```
roslaunch transbot_mulity transbot_mulity_control.launch namespace:=robot1
is_mulity:=false
```

2）、transbot1 starts the robot control code

```
roslaunch transbot_mulity transbot_mulity_control.launch namespace:=robot2
is_mulity:=false
```

1.3.3、Control

On the virtual machine side, press other keys on the keyboard such as "u", "i", "o"; When you remote control with the handle, both cars will move at the same time.

1.3.4、launch file parsing

launch file location：

```
/home/jetson/transbot_ws/src/transbot_mulity/launch/transbot_mulity_control.laun
ch
```

The biggest difference in the robot startup file here is the use of the namespace namespace. With the namespace, there will be no conflict with the same node name when starting the node. For example, in the above example, if the respective namespace namespace:=robot1/namespace:=robot2 is not added, then after starting a node, it will cause a conflict caused by starting the transbot_node node at the same time, and the program will report an error and exit.