Difference between spin and rate.sleep in ROS

Ask Question

I am new to ROS and trying to understand this powerful tool. I am confused by the spin and rate.sleep functions. Could anyone help me with difference between those two functions and when to use which? Thanks.

ros

asked Apr 22 '14 at 18:03

Stephen127
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1 Answer

`ros::spin()` and `ros::spinOnce()` are

messages. If you are subscribing messages, services or actions you must call spin to process the events.

While ros::spinOnce() handles the events and returns immediately, ros::spin() blocks until ros invokes a shutdown. So ros::spinOnce() gives you more control if needed. More on that matter here: Callbacks and Spinning.

rate.sleep() on the other hand is merely a thread sleep with duration defined be a frequency. Here is an example

```
ros::Rate ra
while(ros::ol
{
    rate.sle
}
```

This loop will be executed 24 times a second or

track of how much time since last `rate.sleep()` was executed and sleep for the correct amount of time to hit the 24 Hz mark. See `ros::Rate::sleep()` API.

The equivalent way in the time domain is `ros::Duration::sleep()`

```
ros::Duratio
while(ros::o
{
    duration
}
```

Which one you use is just a matter of convenience.

lited Jul 3 '17 at 6:18

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swered Apr 29 '14 at 13:17

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