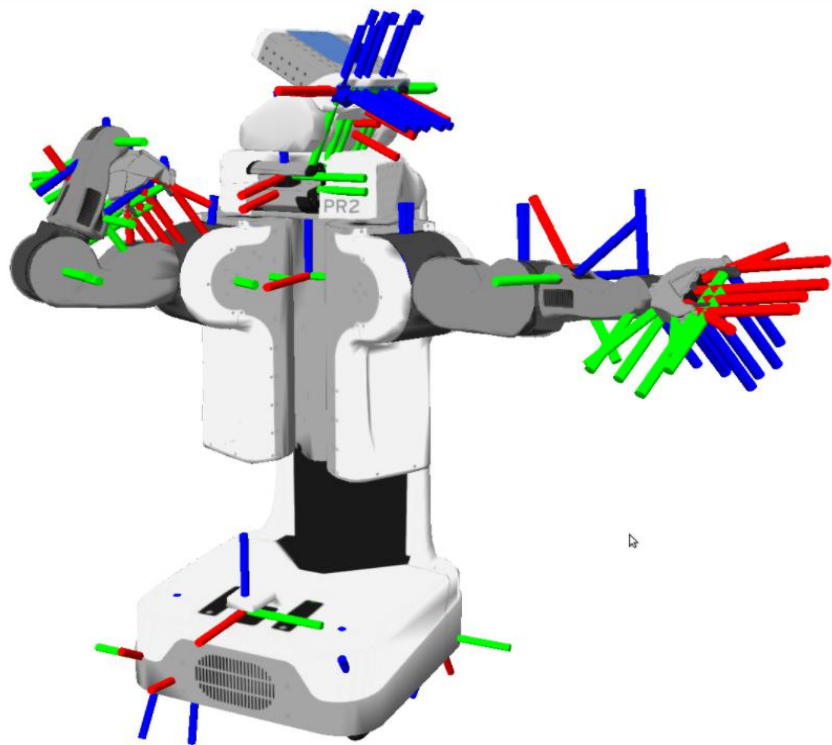




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TF坐标关系变换 讲解

一. ROS坐标管理系统



TF是什么？
TF可以做什么？

二. TF坐标基本概念

TF树

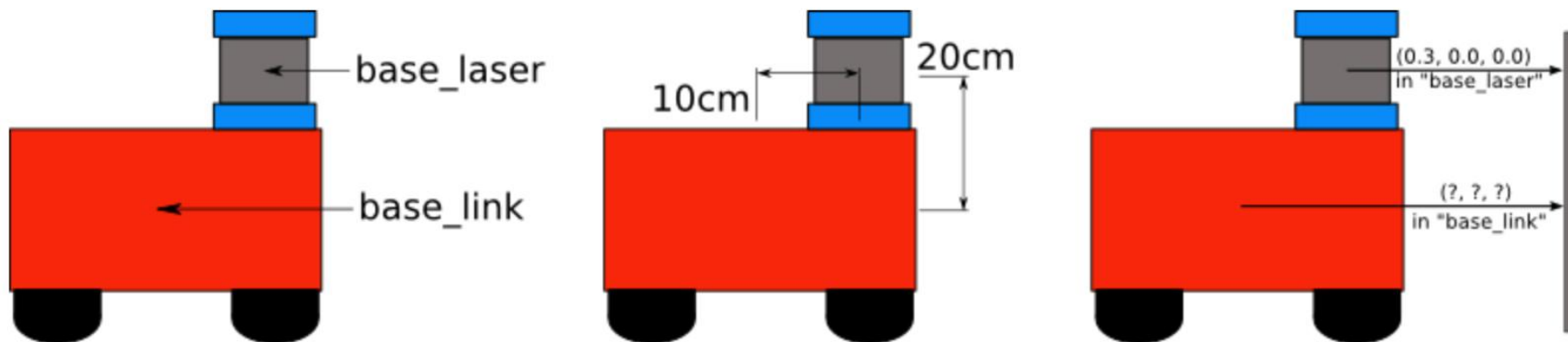
TF的broadcaster

TF的frame_id

TF的基坐标

TF的消息数据类型

三. TF静态坐标变换



```
<node pkg="tf" type="static_transform_publisher" name="broadcaster"
args="x y z yaw pitch roll link1_parent link1 period_in_ms" />
```

```
<node pkg="tf" type="static_transform_publisher" name="broadcaster"
args="x y z qx qy qz qw link1_parent link1 period_in_ms" />
```

四. TF广播器与监听器

4.1 TF广播器

```
static tf2_ros::TransformBroadcaster br;  
geometry_msgs::TransformStamped transformStamped;  
...  
transformStamped.xxx=xxx;  
...  
br.sendTransform( transformStamped );
```



4.2 TF监听器

```
tf2_ros::Buffer tfBuffer;  
tf2_ros::TransformListener tfListener(tfBuffer);  
geometry_msgs::TransformStamped transformStamped;  
transformStamped = tfBuffer.lookupTransform("target", "source",time);
```



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THANK YOU

感谢聆听