Week1.2

Finding out what's happening - ROS Topics

ROS Topics

- ROS Topics: Transport information between nodes.
  - Information superhighways in a ROS application.

- Information is organized as a data structure.
  - collection of different data types such as strings, integers, floating point numbers, etc.

- Topic is identified by a "name" and a "type".
  - standard type or custom type.

ROS Topics – Inspection commands

Setup ROS Environment in a new terminal

```
source <path_to_ROS_workspace>/devel/setup.bash
```

- Several ways to proceed forward

List all topics that are being exchanged between nodes

```
rostopic list
```

Topic data structure

```
rostopic info <topic_name>
```

Print topic contents on the terminal

```
rostopic echo <topic_name>
```

Command – rostopic list

```
donnie@tudelft:~$ rostopic list
/rosout
/rosout_agg
/topic_1
donnie@t
```

Recall!!

List all topic   tween nodes

/node_1 → /topic_1 → /node_2

Command – rostopic info <topic name>

```
donnie@tudelft:~$ rostopic list
/rosout
/rosout_agg
/topic_1
donnie@tudelft:~$ rostopic info /topic_1
Type: std_msgs/String          ← Topic data type

Publishers:
 * /node_1 (http://tudelft:35439/)

                    Nodes interacting via this topic
Subscribers:
 * /node_2 (http://tudelft:34711/)


donnie@tudelft:~$ █
```

Show topic data type and node associations

Command – rostopic echo <topic name>

Continuously print topic contents on the terminal

Quick Recap

- Three utility commands for finding information about ROS nodes
  - rosnode list, rqt_graph, rosnode info <node name>

- Three utility commands for finding information about ROS topics
  - rostopic list, rostopic info <topic name>, rostopic echo <topic name>

- Important detail: Do not forget the **"/"** before node and topic names!