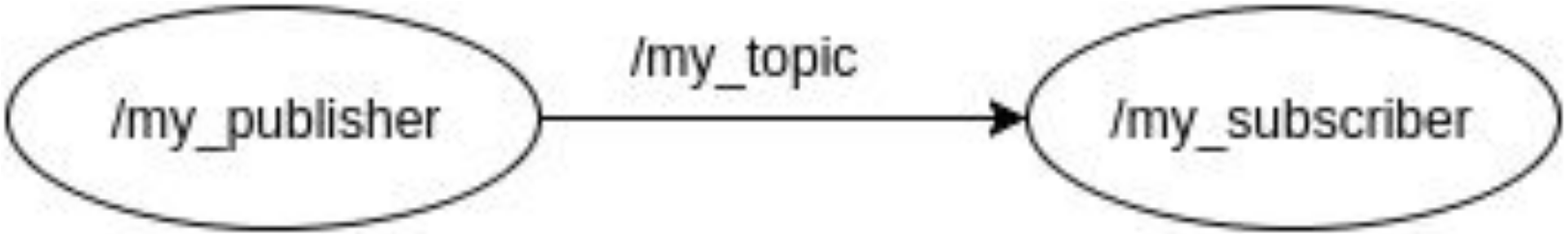
What is ROS?

(Baby don’t hurt me)

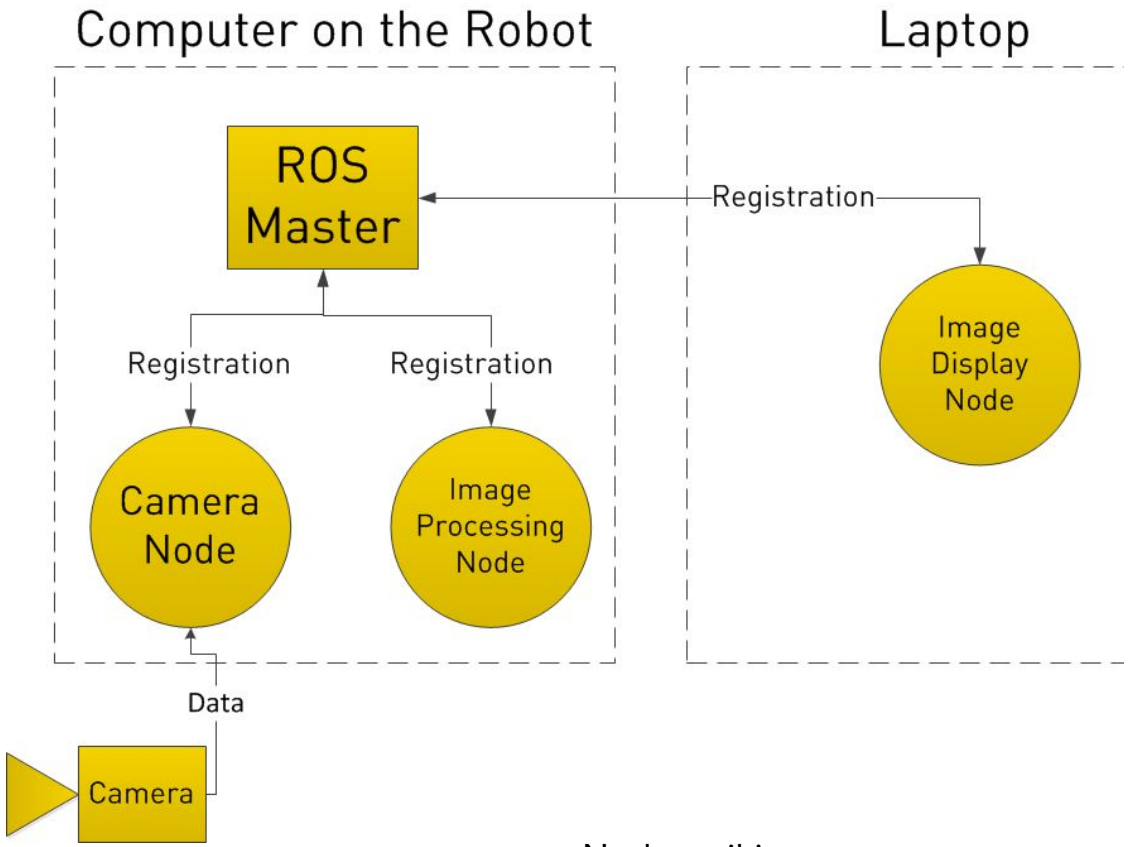
By Robert Ek

- ROS: Robot Operating System
- Allows for easier “collaboration” between hardware and software
- Breaks down a complex system into smaller components using concepts like Nodes and Topics.



What is a node?

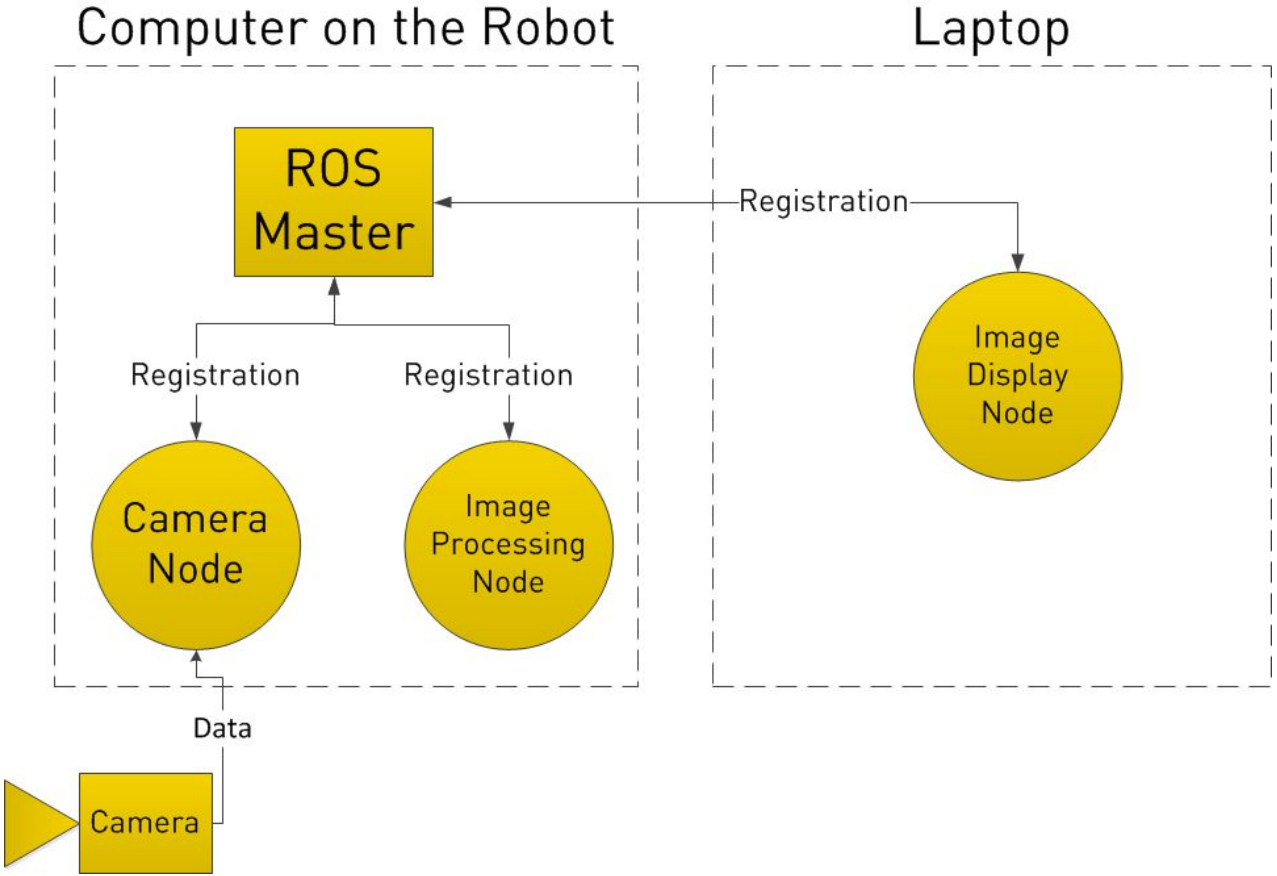
- Performs a specific task within your software system
- Data/information processing unit



Nodes wiki:
http://wiki.ros.org/Nodes

All Nodes are registered to the ROS Core/Master Node

- Roscore node allows for other nodes to be active
- Keeps track of all the nodes like a bookkeeper
- No active Roscore, no active nodes or topics



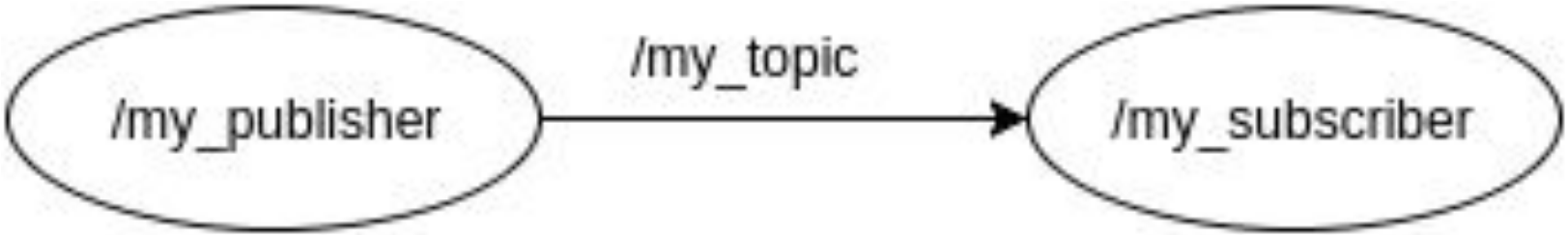
Publishing/Subscribing Nodes

Publisher Nodes:

These nodes **send** data to a particular ***TOPIC***

Subscriber Nodes:

These nodes **listen** for data from a particular ***TOPIC***



Topics

- Where data from nodes can be sent to, or where data sent from nodes can be obtained.

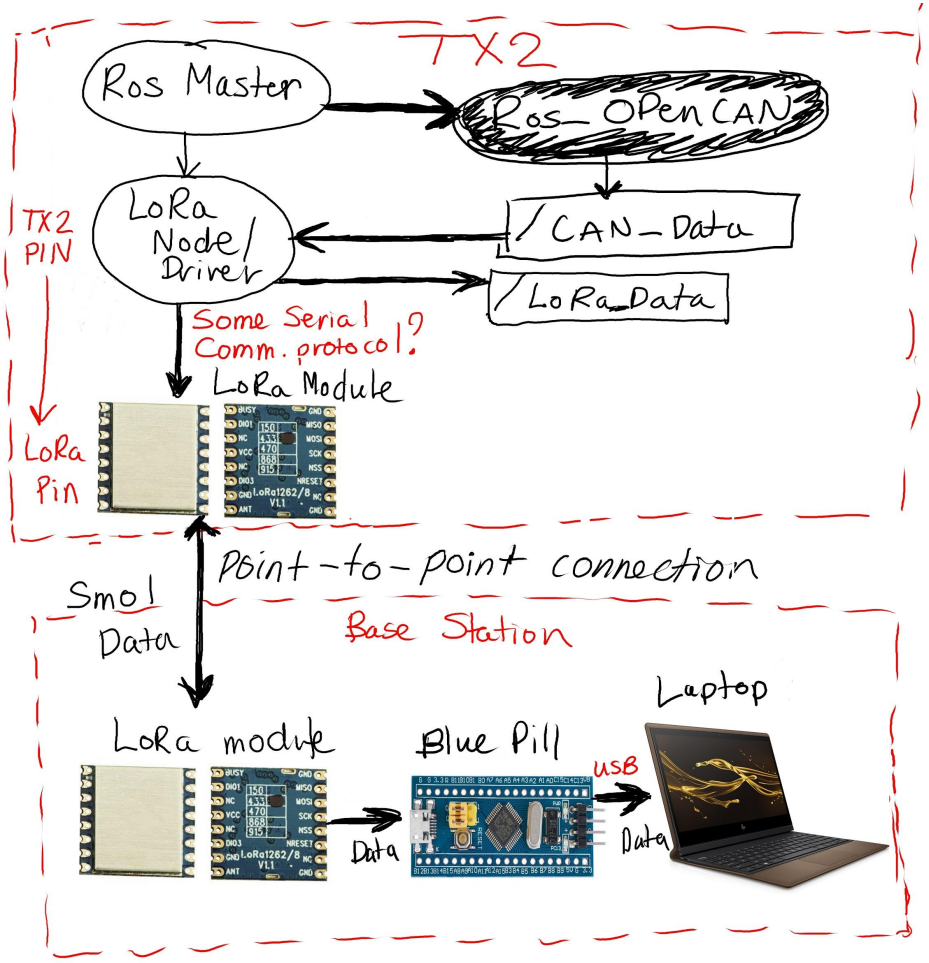
Topics wiki:
http://wiki.ros.org/Topics

Mail Analogy

Bob

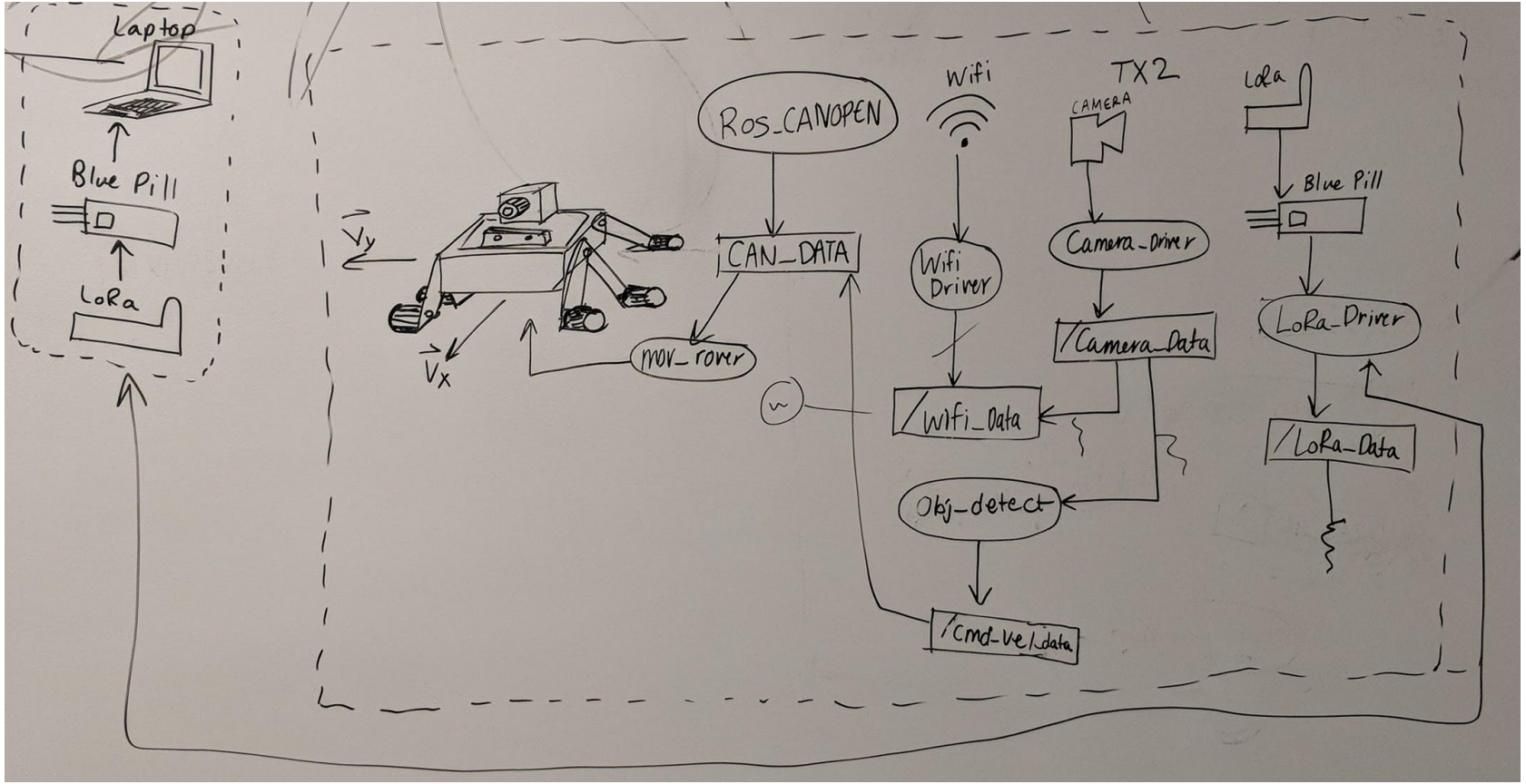
Jane

Possible ROS Architecture for LoRa Module**



**Note: This is a prototype architecture of how the LoRa module will operate within ROS. There will be revisions in the future.

Possible ROS Rover Architecture



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