

# Mini Formative Project

## ROS Publishers and Subscribers

### Scenario:

We have a mobile robot (A mars Rover for example)

- The Robot has wheels of a certain radius
- The wheels have a rotary encoder sensor on it - which outputs how many rpm the wheel is rotating at.
- For simplicity, we can assume that the Robot is moving at constant speed

### Tasks

#### First Item:

- Create publisher node - Publishes to the topic ("/rpm")
- Rpm is a constant value of your choice which represents the sensor value

HINT: We have no idea how fast the robot is going - Unless we account for the wheel size

#### Second Item:

- This second node Subscribes to the /rpm topic
- Calculates speed of robot based on wheel size
- Publishes to topic /speed

HINT: Speed is measured in m/s

- Feel free to choose your own option (Comment your justification)

HINT: Draw it out

- An architecture of how this would work - It is always good to have a plan

In Summary: You are creating 2 nodes - One publishes value (of rpm) - Second node subscribes to the value of rpm and publishes calculated speed.

BREAK A LEG!

