S#2 G mapping Slam

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Open Slam G-mapping

- Simultaneous Localization and Mapping
- Occupancy Grid Map
- Cost Maps

Requirements :

Diff drive
- Odometery Data
- Horizontal Lidar
- Tf Tree

RVIZ

occupied

Cost Maps

- Red cells represent obstacles in the cost map,
- Blue cells represent obstacles inflated by the inscribed radius of the robot,
- Red polygon represents the footprint of the robot.

For the robot to avoid collision, the footprint of the robot should never intersect a red cell and the **center point of the robot** should never cross a **blue cell.**

https://wiki.ros.org/costmap_2d