

L9-C1 Radioactivity sensor and SLAM

In the design of a robot for intervention in nuclear disasters, you equip the robot with a radiation sensor. As often for this type of sensors, the sampling frequency is low (5 Hz) and the detection angle is very small (1 degree). The sensor can measure the distance of the radiation source. You equip a mobile robot with this sensor, mounted to look in a fixed direction, straight forward. The goal of the robot is to map the disaster area, both for obstacles and radiation sources. Which of the following sentence apply to this case?

- A. Performing SLAM with the radiation sensor will be extremely hard or slow, because of the angle of view.**
- B. Performing SLAM with the radiation sensor is optimal, especially when the robot is moving forward, because of the placement of the sensor in front of the robot.**