Abstract

In this world, robot is still be an interest topic that can be exploited as widely as possible. The use of *Artificial Intelligence* is one of them. Kontes Rotot Indonesia – Kontes Robot Cerdas Indonesia held annually by the Directorete of Education Indonesia that aims to improve the quality of education. This annual event is used as a medium channel the interest and talents of students in the field of robotics technology. One of the contested category is Fire Fighting Robot Contest. This ribot serves as a resource locator of fire and then served to extinguish it and return to the their position start.

In fact, in recent time, the mapping problem has seized the attention of many researchers. This is because the mapping problem often becomes a complicated problem because of the limitations of the robot sensors in obtaining information from the environment. Because it is the writer is trying to offer the form of simulated implementation of Reinforcement Learning algorithm called Q-learning for mapping the room and search the fastest path.

Keywords : robot, *Reinforcemet Learning*, Q-Learning, *mapping*, *fastest path,* simulation