Improved Line Maze Solving Algorithm for Curved and Zig-zag Track

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Abstract— Line maze solving algorithm is an algorithm used to solve a maze made of lines to be traced by a mobile robot. But it is designed only for lines with right angle intersection or turn. Meanwhile in real world, there are also curved and zig-zag turn. In this work, this algorithm is tested for curved and zig-zag track by using Arduino Uno. It turns out that line maze solving algorithm still has some deficiencies, even for the maze without curved and zig-zag line. Moreover, for the curved and zig-zag track, algorithm improvements are needed. Therefore, some of existing functions has been modified and replaced, and one new function added. When the improvements have been done, new algorithm is obtained. Then the test is done again on the mobile robot in a line maze with curved and zig-zag track. The result has proven that the new algorithm has successfully solved the maze.

Keywords— *line maze solving algorithm, Arduino Uno, curved and zig-zag track, mobile robot, line tracer*

I. Introduction

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