



VIRTUAL COORDINATE FOR MOBILE ROBOT

Industrial University of Ho Chi Minh City - Faculty of Electronic Technology

Student: Le Hoai Thanh and Tran Hoang Huy

Abstract

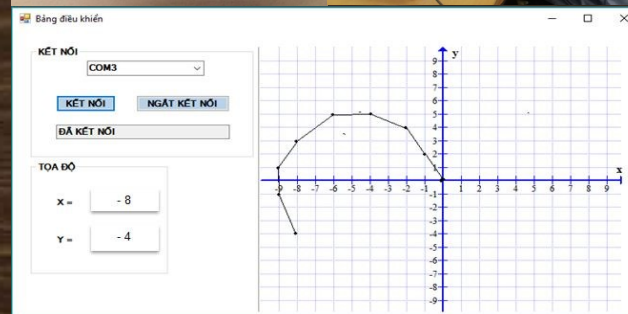
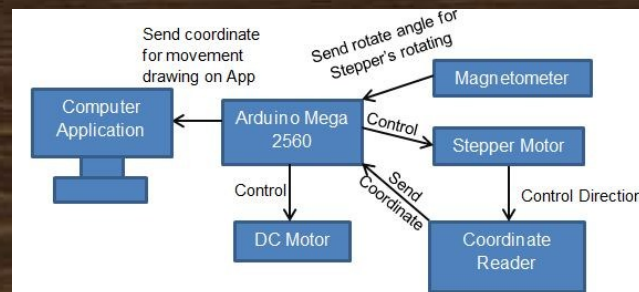
Nowadays, Robotics play an important role in factories. Locating for these Robots is a needed work that help controlling their movement in work place and doing tasks. The design is to make an virtual coordinate that can locate Robot whenever it moves, base on their movement we can give them the command.

Introduction

Locating for mobile robot is developing with many method, they are complicated and need an expensive hardware requirement. Because of those disadvantage, we decide to make an costless locator base on computer mouse's coordinate . This system can help us locate Robot's position in work environment so that we can give them command.

Method

This project base on extending the coordinate system of the computer mouse , we make a virtual coordinate and show the Robot's movement on that coordinate by an application on computer .



Conclusion

This project has archived these objective:

- Read the coordinates of mobile robot and send them to the computer through Serial Port.
- Stabilize the reader with stepper motor and magnetometer.
- Show the Robot's movement on computer application.

References

- <http://arduino.vn/bai-viet/685-huong-dan-dieu-khien-dong-co-buoc>.
- <https://www.youtube.com/watch?v=h7gEIYWgt0k>.
- *SPCP168A– Optical Mouse SoC datasheet - 2.Features, 4 Pin Assignment , 6. Electrical Characteristics- Pages 3,4, 6.*
- *LMS303DLHC datasheet - Features and Pin description - Pages 1/42 and 8/42.*