Navigation System for Two Wheeler Vehicle

Disha Kolte

TE student, Electronics and Telecommunication Engineering, PCCOE

Abstract - **The present invention describes a navigation system which helps to navigate through roads on two wheeler. It comprises IoT board, LEDs and a mobile app. Navigation becomes easy on two wheeler using this system as it uses LEDs for navigation and also navigation becomes safe as on road listening to instructions or viewing the instructions is very difficult, unsafe and violets traffic rules.**

Index Terms - **Iot, mobile app, navigation system for two wheelers.**

I. INTRODUCTION

While driving two wheeler it becomes difficult to listen instructions or view the instructions on mobile. It is also very unsafe and violets traffic rules.

II. SUMMARY OF INVENTION

The proposed invention navigation system for two wheeler will make use of LEDs to help two wheeler driver to navigate through roads. The LED will be programmed through a mobile app which will make use of Google maps to get the directions of the route for desired destination and will blink LEDs according to the algorithm of app. The app and the LEDs are connected through IoT module to each other.

III. BRIEF DESCRIPTION OF DRAWINGS

Fig 1

Figure 1: Shows the installation of navigation system on two wheeler

IV. DETAILED DESCRIPTION OF THE INVENTION

The system comprises of IoT board eg. Bolt IoT board(as it has small size so the size of system becomes small and installation becomes easy), 4 LEDs – 2 yellow and 2 red and a plastic box(1), 4 resistors and wires with the rubber insulating tubes to safeguard wires(2).

The LEDs fitted on top of the side mirrors are connected to app through IoT board which is placed at position 1 in figure. The LEDs are fitted on top of side mirrors as signals given by LEDs can be viewed very easily during driving two wheeler by driver.

Two colour LEDs are used yellow and red as they can be easily noticed during daytime also.

The plastic box contains the IoT board so that the connections of LEDs with the Iot board does not get disconnected due to any movement of vehicle.

The mobile app makes use of Google maps to get direction of route for desired destination using the Google maps APIs.

It is still further object is to disclose an improvement, the system can made in-built so that the indicators of two wheeler vehicle can be also made synchronous with the app instructions. So that with the indications from app will control both the navigation system LEDs and the indicator LEDs of vehicle.

V. ALGORITHM

- If lost connection – blink red led
- If right turn then right yellow led will work
- If right turn less than 500m and more than 100m right yellow led on
- If right turn less than 100m right yellow led blinks at faster rate
- Same for left turn
- If made wrong turn red LEDs on both sides will blink at faster rate i.e. for U-turn.

VII. CONCLUSION

We conclude that using this navigation system will help two wheeler driver to navigate through roads easily and safely without violating any traffic rules. As the system can be easily installed and can be used very easily on road as there is no need of listening the instructions or viewing the instructions while driving the vehicle.

REFERENCES

[1] Google Maps documentation

LITERATURE REVIEW

Garv Modwel, Anu Mehra, Nitin Rakesh and K K Mishra "Smart Two Wheeler Navigation System for Smarter Driver and Live Object Detection" ScienceDirect, Procedia Computer science, 2020.