Novel Method using Beacon and Smart Phone for Visually Impaired/Blind People

Abstract

This paper presents novel structure for visually impaired/blind people using beacon and smart phone. The proposed structure is consisted of three parts. In the first part esp8266 module due to ultra-low power consumption, in the second part configurator application to configure these beacon and last part is mobile application to detect these beacons. The aim is to help visually impaired/blind people to knowledge the environment in which they live by. Three tests applied in real environment. The results show good performance for the suggested scheme help the visually impaired/blind people reach the desired devices location successfully without error. In conclusion, beacon and smart phone were a valid and reliable method to help the visually impaired/blind people to know the location of devices that are nearest from him in indoor environment.

References

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Index Terms

Computer Science

Software Engineering

Keywords

Beacons, smart phone, visually impaired/blind people, RSSI, esp8266 module and indoor navigation.