SMART HOME LIGHTING CONTROL SYSTEM USING BLUETOOTH

BASED ANDROID SMARTPHONE

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Abstract

A smart home system provides comfort, convenient living, energy saving, safety and security for the users. Using a Bluetooth based smart home Android consumers can control everything in a remote location in short response time. Users easily can switch on and off any electrical devices in their home such as controlling the lighting switching without physical interaction. The purpose of this project is to demonstrate lighting control system concepts using enabled Bluetooth Smartphone with implementing a prototype using relay board. This system using Arduino Uno microcontroller to controlled the relay board by sending the command. Conclusion obtained is this system can help users in order to control the lighting home system more easy and effective.

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CHAPTER 1

INTRODUCTION

1.1 Project Background

The smart home concept has existed for many years. It provides a living environment with comfortable, energy saving, safety and health care place for people living [1]. This concept enhanced the way of monitoring and control over the devices and appliances without physical interaction with the power supply [2]. The research previously conducted shows the lighting control system using Bluetooth communication technology was developed for smart home system application. By using microprocessor integrated with Bluetooth technology, user be able to monitor and control the use of electrical energy and electrical appliances in convenient way.

A lighting control system using Bluetooth based Android Smartphone is the way to control on and off single phase switching using Bluetooth technology. This system based on the smart home system where the user can control the switching state neither on stage or off state from anywhere at home without physically touch the switch. Basically, the interactions between smart phone and the system control by the android application software on the Smartphone which can be installed from "Play store. The user can control their lamps by log in into the smart phone application. This prototyped using" Arduino Total Control" application to control the lamp function and this application integrated the circuit designed. The system programmed using Arduino code which can rewrite on the Arduino microcontroller so easily by connecting to the computer software without buying complicated microcontrollers [7].