iJRASET

International Journal For Research in
Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 7 Issue: VI Month of publication: June 2019

DOI: <http://doi.org/10.22214/ijraset.2019.6426>

www.ijraset.com

Call: 08813907089

E-mail ID: ijraset@gmail.com

Android based Wi-Fi Enabled Universal Remote

Mrs. Usha G R¹, Mr. Kiran M C², Ms. Madhura patgar³, Ms. Kirthi M Rai⁴, Kowshik H S⁵
^{1, 2, 3, 4, 5}Department of ISE, SDM Institute of Technology, Ujire-574240, Karnataka, INDIA

Abstract: As our world is digitizing, each and every product will have its own remote to get controlled. As a human it is so difficult to handle which remote has to be used for which device as there will be a heap of remotes. Even though smart phones can be used as remote, but in many homes old age peoples doesn't know the usage of smart phones and also we have to download separate apps for each device. This will consume more phone memory. To gradually reduce this burden and make human life easier, required android software will be downloaded and maintained in a system. From this any device can be optimized through this one device. The main aim of this project is to reduce using different remote for each device such as AC, TV, projector, microwave oven, speakers and so on. We know that voice recognition devices have already emerged as it is too expensive so by keeping in mind about cost and easy implementation this idea has been figured. To implement this project, we use the android OS to integrate different remote application in one specific device.

Keywords: Android, Remote, Wi-fi, OS

I. INTRODUCTION

As we knew nowadays each home electrical instruments comes with separate remotes. The remembering of the function of which is also difficult for operators. All these remotes works with IR rays, each remote uses different frequencies to operate their instruments. As a human it is so difficult to handle which remote has to be used for which device as there will be heap of remote to operate appliances at home. To gradually reduce this burden and make human life easier required android software will be downloaded and maintained in a system. So any device can be optimized through this one device. The main aim of this project is to reduce using the different remote for each device such AC, TV, projector, microwave oven, speakers and so on. The IR remote control performing well with their reliable transmission as signal to noise ratio is less. Hence IR remote applications are most popular in the usage of controlling of all home appliances.

II. LITERATURE SURVEY

Jianjun L et. al developed a new USB Home appliances based on PC and Infrared remote control protocol [1]. The remote which is used separate foe each and every home appliance such as TV, DVD etc. The technology used is infrared transmission. But sometimes infrared signal transmission lacks in manipulating all kind of home appliances. With usage of single chip microcontroller and USB interface, proposed a IR remote control system, which can code and decode all of the infrared remote control protocol, and integrate with the transmission and receiver. M. Puthanial, et. al worked on Android and Bluetooth Technology Enabled remote control with smart phone [2]. This kind of remote is worked using smart phone and Bluetooth is used to connect targeted appliances. Main goal of this project is used to minimize the manual work. So each and every home must have at least one smart phone. Ting-Fang Chueh et. al made Universal remote control using smart phone [3].

They proposed a context-aware plug and play universal remote control recognized by NFC and through Bluetooth to download application with easy to use graphical user control interface by UI generator. These papers mainly focused on using smart phone as a universal remote where the application installed in smart phone and control all home appliances. C S Choy proposed An Infra-Red Remote Control System Designed for Universal Control [4]. This describes Infrared functionality controlling the Switches. Author mainly developed this remote on innovative link procedure which is designed to control switch and custom IC.

Pallavi Patil et. al developed Universal Remote for Next Generation [5]. Universal remote used in our daily life will lead back common remote used for each and every home appliances such as TV, AC, DVD etc. The difficulties faced by the designer of universal remote is used to propose each and every operation of remote and design single transmission home appliances. The programming such remote is complex task. This paper present an implementation of a universal remote control using PSoC #5 which has functionality of IR sensor and it has been decoded the Philips and Samsung separately.

Figure 2: Flow Diagram

B. Proposed System

As there are many users at home for home appliances, they need android phone with required android application installed in it. These applications are not affordable by everyone such as kids, illiterate, senior citizens or specifically who does not know to operate android phones. And also signals of the network might effects on the health of children. In order to give solution to these problems a single remote will be introduced to control all devices. This project consists of software and hardware. The scope can be separated into three parts and there are design of smart phone application, wireless configuration and Infrared transmitter unit. Android application in this project will focus on all operation of all home appliances which is controlled using remotes.

VI. CONCLUSION

A simple and cost effective universal remote control system is described. The concept is demonstrated in controlling home appliances such as TV, DVD and AC. This paper proposes a universal remote control using IR sensors and Android Apps. The advantage of Universal Remote control is one can get relieve from the stress of handling too many remote control units and this remote is affordable for all kind of users. For future enhancement we can add solar power and touch panel for easy and effective use.

REFERENCES

- [1] Lv, Jianjun, et al. "A new USB home appliances based on PC and infrared remote control protocol." *2010 International Conference on Computer and Communication Technologies in Agriculture Engineering*. Vol. 3. IEEE, 2010.
- [2] Puthanial, M., et al. "Android and Bluetooth Technology Enabled Remote Control Using Smart Phone." *International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering* 3.5 (2014): 9373-9380.
- [3] Chueh, Ting-Fang, and Yong-Yi Fanjiang. "Universal remote control on smartphone." *2012 International Symposium on Computer, Consumer and Control*. IEEE, 2012.
- [4] Choy, C. S. "An infra-red remote control system designed for universal control." *IEEE transactions on consumer electronics* 41.4 (1995): 1089-1094.
- [5] Pallavi Patil and M. A. Dixit "Universal Remote For Next Generation" *International Journal of Electrical, Electronics and Data Communication*, ISSN: 2320-2084

10.22214/IJRASET

45.98

IMPACT FACTOR:
7.129

IMPACT FACTOR:
7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)