

FINAL YEAR PROJECT REPORT

FPGA BASED HOME AUTOMATION

In fulfillment of the requirement For degree of BE (ELECTRICAL)

By

MUHAMMAD USMAN	19296	BEE
M. ZEESHAN AFZAL	19302	BEE
MUHAMMAD WAQAS	19299	BEE

· (())

SUPERVISED

BY

ENGR. MASOOD USMAN 2013

BAHRIA UNIVERSITY (KARACHI CAMPUS)

Acknowledgments

We have made efforts in this project. However, it would not have been possible without the generous support and assistance of many individuals and organizations have been possible. We wish to express our sincere thanks to each of them.

We very grateful to HOD Engr. Dr. M. Waheed-uz-Zaman and project advisor Engr Masood Usman for their guidance and constant monitoring and providing the necessary information on the project and also to aid in the implementation of the project.

We wish to express our gratitude to my parents and members of Bahria University Karachi Campus for their kind assistance and encouragement to help us in the completion of this project.

We wish to express our thanks and gratitude for the people in the industry they gave us so much attention and time.

Our thanks and appreciation also goes to our colleague in the development of the project and those who voluntarily helped us with their skills.

Abstract

This article describes a study on the potential for remote control of home automation systems. It deals with the implementation, discusses possible solutions through a variety of networking technologies, and shows how to optimize the use of these systems. The home is an eternal, heterogeneous distributed computing environment, which will require careful study before developing a suitable home automation system (HAS), which will seek to achieve its requirements. However, the latest attempt by the introduction of home automation systems in real homes for all types of users starting to be successful through continuous standardization process to lower prices and make the device after re useful and easier to use for the end user. Even so, several important questions are always treated strictly before developing and install home automation system, factors such as security, reliability, usability, robustness and cost are critical to determining whether the final product will achieve the expected requirements.

Table of contents

1.	INTRODUCTION	10
2.	BACKGROUND AND LITERATURE REVIEW	14
3.	AIM AND STATEMENT OF PROBLEM	18
4.	ANALYSIS AND DESIGN	20
5.	IMPLEMENTATION	24
6.	TESTING	39
7.	RESULTS	51
8.	DISCUSSION	56
9.	CONCLUSIONS	57
10.	FUTURE WORK	58
11.	APPENDICES	61
12.	REFRENCES	71