Universiti Teknologi MARA

Wearable Doorbell Notification for Deaf People

Hafiqa Eliya Binti Haliza

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STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own work and any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

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HAFIQA ELIYA BINTI HALIZA

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ABSTRACT

Wearable Doorbell Notification for Deaf People is a wearable device to alert the deaf people who supposed to be the wearer of the device whenever there are people pressed their doorbell by using the wireless technology, nRF24L01 wireless module and Arduino Nano to produce the device with additional components such as push button, LED, LCD and vibrating motor. Most deaf people were using light doorbell notification that was placed in certain room. This situation caused them to not be alert of the light doorbell notification if they stay in another room because of mobility issue. The project objective includes the development of the wearable doorbell notification and evaluation of its reliability based on its functionality and network performance. There is two types of experiments were conducted in this project, functionality test and network performance test. These experiments have been divided into a few parts. The results shows that the higher the RF power amplifier used by nRF24L01, the higher the distance that can be reached by a signal from the doorbell to the wearable. It also shows that the data transmission rate did not influenced the response time of the wearable. The recommendations for future research were to fix the problems in the wearable and create a wearable alert device with more alarms such as baby crying alarm, fire alarm and vulgar alarm.

TABLE OF CONTENTS

CONTENTS **PAGE**

SUPERVISOR APPROVAL ii

STUDENT DECLARATION iii

ACKNOWLEDGEMENT iv

ABSTRACT v

TABLE OF CONTENTS vi

LIST OF FIGURES x

LIST OF TABLES xii

LIST OF ABBREVIATIONS xv

CHAPTER ONE: INTRODUCTION

1.1 Background 1
1.2 Problem Statement 3
1.3 Research Objectives 4
1.4 Research Scope 4
1.5 Significance of Research 5
1.6 Expected Outcome 6

CHAPTER TWO: LITERATURE REVIEW

2.1 Hearing Loss 7
2.1.1 Definition 7
2.1.2 Causes of Hearing Loss 8

3.3 Conclusion 30

CHAPTER FOUR: PROJECT DEVELOPMENT

4.1 Introduction 31
4.2 Development the Prove of Concept 31
4.2.1 Hardware Development 31
4.2.2 Programming 40
4.3 Prototype 47

CHAPTER FIVE: EXPERIMENT AND ANALYSIS

5.1 Introduction 48
5.2 Functionality Testing 48
5.2.1 Functionality testing on the wearable before and after the doorbell is pressed 49
5.2.2 Functionality testing based on the serial monitor outputs on doorbell and wearable 51
5.3 Network Performance Testing 56
5.3.1 Network performance testing in open area using different level of RF power amplifier on nRF24L01s 57
5.3.2 Network performance testing inside a house using different RF power amplifier on nRF24L01s 61
5.3.3 Network performance testing inside a house using different data transmission rate on nRF24L01s 65
5.4 Analysis of Functionality Testing 68
5.4.1 Analysis of functionality testing on the wearable before and after the doorbell is pressed 68
5.4.2 Analysis of functionality testing based on the serial monitor outputs of doorbell and wearable 70