Universiti Teknologi MARA

Home Automation System Using Parallel Port

Muhamad Syahrizam bin Salidin

Thesis submitted in fulfillment of the requirements for Bachelor of Science (Hons) Information System

Engineering

Faculty of Information Technology And

Quantitative Science

November 2005

DECLARATION

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

NOVEMBER 21, 2005

MUHAMAD SYAHRIZAM BIN SALIDIN 2002328598

ABSTRACT

The main purpose of this project is to help users how to control their electrical appliances while they are not at home through the control timer. This project focused on the developing home automation system in Windows platform. The home appliances can be controlled through parallel port on Personal Computer (PC) by program developed using software for example Microsoft Visual Basic. The home appliances and the PC can be accessed and controlled via parallel port cable by a Home Automation System program. Parallel port interface circuit was constructed for the purpose of the controlling the appliances. Basically the parallel port is to be used as a media interface in this controlling purpose. The parallel port is a very simple and affordable technique in controlling external circuitry. With just a D-Type 25 Pin Male Connector, buffers, relays and simple wiring, the computer can be interfaced to the external devices.

TABLE OF CONTENTS

CON	ITENT	PAGE
APPROVA	L.	ü
DECLARA	üi	
ACKNOW	iv	
ABSTRAC*	Т	v
LIST OF T	xi	
LIST OF A	xii	
LIST OF F	xiii	
CHAPTER	1: INTRODUCTION	
1.1	Background	1
1.2	Problem statement	3
1.3	Objective of the project	4
1.4	Scope of the project	4
1.5	Significance of the project	5
1.6	Structure and organization of this document	5
1.7	Conclusion	6
CHAPTER	2: LITERATURE REVIEW	
2.1	Introduction	7
2.2	Overview of Home Automation	
	2.2.1 Home Automation Defined	7
	2.2.2 Why Home Automation?	R

	2.2.3	Home Automation Works	9		
	2.2.4	Method of control	10		
	2.2.5	Items to be controlled	12		
	2.2.6	Types of system	13		
	2,2.7	Systems costs	14		
2.3	Programming Language				
	2.3.1	Visual Basic (VB)	16		
	2.3.2	Visual Basic Features	17		
2.4	Parall	Parallel Port			
	2.4.1	Introduction to the Parallel Port	18		
	2.4.2	Why Parallel Port	21		
	2.4.3	Parallel Port Mode	22		
		2.4.3[a] SPP Mode	22		
		2.4.3[b] EPP Mode	24		
2.5	Simila	Similar Works and Research			
	2.5.1	Controlling Home Appliances Over The Internet By			
		Muhammad Ucar, Drexel University, Philadelphia, US.	24		
	2.5.2	Auto-Mate: Intelligent Home Automation Using Mains			
		Power Communications by Warren Astings, University			
		Of Queensland, Australia.	27		
2.6	Revie	Review of Similar Home Automation Products			
	2.6.1	Secure Smith from INIX Technologies Sdn. Bhd.			
		(Adapted from http://www.inix.com.my)	28		
	2.6.2	Security from Infotech Accord Sdn. Bhd.			
		(Adapted from http://www.ia.com.my)	30		
2.7	Concl	Conclusion			