HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN AND CONSTRUCT A COMPUTERIZED HOUSE

E.1346

ANDREAS MINAS

HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN AND CONSTRUCT A COMPUTERIZED HOUSE

E.1346

BY ANDREAS MINAS 3E1

SUPERVISOR

Mr. Ch. Theopemptou

JUNE 2004



CONTENTS

INTRODUCTION

- CHAPTER 1: CONCEPT AND RESEARCH.
 - 1.1.1: COMMUNICATION WAYS
 - 1.1.2: INFRARED
 - 1.1.3: BLUETOOTH
 - 1.1.4: MICROWAVES
 - 1.1.5: MODEM
 - 1.1.6: ANTENNA
 - 1.2.1: COMMUNICATION DEVICES
 - 1.2.2: PERSONAL COMPUTER
 - 1.2.3: LAPTOP
 - 1.2.4: MOBILE PHONE
 - 1.2.5: iPAQ

CHAPTER 2: DEVICE CONTROL

- 2.1.1: FURTHER INFORMATION
- 2.1.2: HOW NEVO OPERATES
- 2.1.3: HOUSE CONTROL
- 2.1.4: REMOTE EXTENDER
- 2.1.5: TUNER EXTENDER

CHAPTER 3: OTHER USEFUL FUNCTIONS

- 3.1.1: WINDOWS MEDIA PLAYER
- 3.1.2: RECORD FUNCTION
- 3.1.3: POCKET EXCEL-POCKET WORD
- 3.1.4: ENTERTAINMENT
- 3.1.5: CALENDAR
- **3.1.6: CONTACTS**
- 3.1.7: INTERNET APPLICATIONS

CHAPTER 4: PICTURES

CHAPTER 5: APPENDIX

5.1.1: WIRELESS HEADPHONES

5.1.2: INFRARED DISTRIBUTION

CHAPTER 6: PROJECT CONCLUSIONS

Introduction

This project begins right after the electrical installation of a typical domestic house. Therefore no reference to the electrical calculations or electrical designs will be provided. The whole idea of this project is to computerize in any way possible the switching functions of the house without the use of any wires, with computerized devices as far as possible.

The concept is that the person inside the house doesn't do any unnecessary actions with ultimate purpose the relaxation. There are no wires connecting the switching devices inside the house therefore no extra money must be spent on structure cabling. The only money spent will be those on the controlling device and some other stuff for construction, which is relatively cheaper than wiring the whole house with category six cables or fiber optics. The controlling way and device will be researched below for the best results.

On the various chapters below, the functions of the selected device will be fully explained, with some possible applications and tested examples. This project is relatively easy since it is mostly software and less hardware. Software includes the device instructions and use, and hardware a part of the project that needs to be constructed.