

DEDICATION

To mom ,,

My husband & children's thanks for being there from day

one and being my pillar of support,,

My sprite father , dad (D. ELkhair Khalafalla) ,,

brother and sisters,,

You have been there from the beginning and have made

me who I am today,,

ACKNOWLEDGEMENT

All favor due to Allah first and foremost, the project would not be what it is had it not been for the help and support from many people. I would like to thank my supervisor, D. Abdelrasoul Jabar for getting me to this point. Doctor: Thanks for all your help: I think you gave me a very complete experience.

I would also like to thank my examiners D.Balla Aljak & D.Mahmoud Hussain for their comments and suggestions.

I take this opportunity to express gratitude to the head of the Department of Electronics engineering school D. Abu agla and all members.

My friends and colleagues were also of great help. I would like to thank D. Salah Edam : thanks for helping me think deeper about my project.

Abstract

This research displays the design of remote control system based on Short Message Service (SMS) for displaying publicity on Liquid Crystal Display (LCD's). By sending messages in the form of SMS through mobile; It is a wireless transmission system which has very less errors and maintenance. The control center is supplied with Global System for Mobile communications (GSM) for SMS transmission and reception.

The GSM receiver is connected to a microcontroller (AT mega 32) the heart of the system,(is used to store the timings and messages to be displayed, decodes the messages and accordingly sends commands). The microcontroller issues orders to display advertisements as required by the message. It's interfaced with LCD (40*2) display unit. Microcontroller coding will be done using Embedded PASSCOM.

The control system consist of two separate units, control center and control unit.

In the control center a PC can be used with an administrator for monitoring the system so can operation indoors, the indoors electronic devices are within the temperature and humidity limits for proper operation of the hardware where as the control unit operates outdoors. The outdoor units must be fully enclosed and protected from the climate changes for the safety of the hardware.

تجريد

هذا البحث لعرض تصميم نظام التحكم عن بعد على أساس خدمة الرسائل القصيرة (SMS) لعرض الدعاية على شاشة الكريستال السائل (LCD) عن طريق إرسال رسائل على شكل (SMS) عن طريق الهاتف المحمول.

البحث هو نظام للبث اللاسلكي الذي يزودنا بأقل الأخطاء وبالتالي يقلل من الحوجة إلى الصيانة. تم تزويد مركز التحكم بالنظام العالمي للاتصالات المتنقلة (GSM) لنقل واستقبال الرسائل القصيرة. حيث يتم توصيل جهاز الاستقبال (GSM) إلى المتحكم (AT mega32) قلب النظام، والذي يستخدم لتخزين التوقيت والرسائل التي سيتم عرضها، والذي يقوم بترجمة الرسائل وفقا لذلك يرسل الأوامر. ويهدف المتحكم لعرض الإعلانات على النحو المطلوب في الرسالة. حيث يتم ربط المتحكم بشاشات الكريستال السائل (40 * 2) وحدة العرض. ويقوم المتحكم بفك الشفرة باستخدام PASSCOM المضمنة. يتكون نظام التحكم من وحدتين منفصلتين، مركز التحكم وحدة التحكم.

في مركز التحكم يمكن استخدام جهاز كمبيوتر مع مسئول حتى يتمكن من مراقبة النظام و يقال أن العمل من الداخل. الأجهزة الإلكترونية في إطار عملها من الداخل محدود على قياس درجة الحرارة والرطوبة.

أما وحدة التحكم التي تعمل في الهواء الطلق. يجب أن تكون في وضع حماية كاملة من التغيرات المناخية من أجل سلامة الأجهزة الصلبة و لحسن سير العمل في تلك الأجهزة.

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LIST OF ABBREVIATION

LCD	: Liquid Crystal Display
LED	: Light Emitted Diode
GSM	: Global System for Mobil Communications.
SMS	: Short Message Service.
CMOS	: Completer Metal Oxide Semiconductor.
RISC	: Reduced Instruction Set Computing.
MIPS	: Million Instructions Per Second.
EEPROM	: Electrical Erasable Programmable Read Only Memory.
JTAG	: Joint Test Action Group.
ADC	: Analog Digital Convertor.
USART	: Universal Synchronous A Synchronous Receiver/Transmit
SPI	: Serial Peripheral Interface

