

الايه

بسم الله الرحمن الرحيم

﴿فَأَمَّا الزَّبَدُ فَيَذْهَبُ جُفَاءً وَأَمَّا مَا يَنْفَعُ
النَّاسَ فَيَمْكُثُ فِي الْأَرْضِ كَذَلِكَ يَضْرِبُ
اللَّهُ الْأَمْثَالَ﴾

صدق الله العظيم

الرعد (17)

DEDICATION

I dedicate this project . . .

To my mother . . .

To my Father.....

To my Brothers.....

To my Sisters

To my family . . .

To my friends . . .

To my country . . .

To Engineers and students which interest in Patients Monitoring by
Advance wireless systems studies.

Acknowledgment

First of all I thank **Allah** who gave me the power to bring dream true.

My gratitude to my supervisor **Dr. Ibrahim Khider** who showed me a lot of patience and gave me precious direction and he was very interested in the study and has been grade throughout this work.

I would like to thank **Eng.WalaElden Ali** and **Utz.Fatma Abdelhaleem** for their supporting and encourage me.

Lastly I deeply thank all staff of electronic Engineering Department in Sudan University.

ABSTRACT

We are living in the age of high information and communication technology. The telemedicine field is a fertile rapid growth area for researches and the demand of health care increased day by day, for that reason there is a need to improve human health in healthcare systems.

The project was aimed to provide personal health monitoring and information was gathered from patient to doctor by using identity card.

In this project the embedded system was created by using ZigBee technology with low data rate for telemedicine by designed two circuits one for patients and other for doctor monitoring the pulse rate, temperature and direction of patients.

المستخلص

نحن الان نعيش فى عصر تكنولوجيا الاتصالات و المعلومات العالى. هذا المجال يعتبر كمساحة خصبة سريعة النمو يتزايد نموها يوما بعد يوم. و مع هذا النمو تتزايد حاجتنا للرعاية الصحية. لذلك نحتاج لتطوير الصحة البشرية تحت إطار أنظمة الرعاية الصحية.

لقد هدف هذا المشروع لى يمدنا بالمراقبة الصحية للشخص و جمع معلومات حولة و إرسالها الى الطبيب بواسطة إستخدام بطاقة هوية الشخص.

فى هذا المشروع لقد تم عمل دائرتين إلكترونيتين واحده للمريض و الاخرى للدكتور او الممرض لمراقبة المريض استخدمنا خلالهما تقنية ZigBee لعملية الارسال اللاسلكى بينهما التى تتميز بعرض النطاق العالى و قلة التكلفة و قلة التعقيد مقارنة مع الانظمة السابقة.

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Abbreviation

<i>Abbreviation</i>	<i>Abbreviation Name</i>
BASN	Body Area Sensor Network
WSN	Wireless Sensor Network
RFID	Radio Frequency Identification
ID	Identification
DSP	Digital Signal Processor
R&D	Research And Developed
NASA	National Aeronautical and Space Administrator
MHS	Medical Health Service
MedNet	Medical Consultation Network
IT	Information Technology

ISDN	Integrated Service Digital Network
3G	Three Generation
e-health	Electronic Health
IEEE	Institute of Electrical Electronic Engineering
ISM	Industrial Scientist Medical Band
RF	Radio Frequency
MAC	Media Access Control
EPC	Electronic Product Code
LCD	Liquid Crystal Display
μC	Micro-Controller
EEPROM	Electrical Erasable Programmable Read Only Memory
A.C	Alternative Current
D.C	Direct Current
LOS	Line Of Sight
MEMS	Micro-Electro-Mechanical-Sensor
RPS	Regulated Power Supply
ICs	Integrated Circuits
CPU	Central Processor Unit
RAM	Read Access Memory
PCB	Printed Circuit Board
PAN	Personal Area Network

WPAN	Wireless Personal Area Network
CRT	Cathode Ray Tube
LED	Light Emitting Diode
BPM	Beat Per Minute
3D	Three Dimensional
TTL	Transistor Transistor Logic
SCH	Schematic Design
ACC	Accumulator
B	B register
PSW	Program status word
SP	Stack pointer
P0	Port0
P1	Port1
P2	Port2
P3	Port3
IP	Interrupt Priority control
IE	Interrupt Enable control
TMOD	Timer/counter mode control
TCON	Timer/counter control
T2CON	Timer/counter 2 control
T2MOD	Timer/counter mode2 control

TH0	Timer/counter 0 high byte
TL0	Timer/counter 0 low byte
TH1	Timer/counter 1 high byte
TL1	Timer/counter 1 low byte
TH2	Timer/counter 2 high byte
TL2	Timer/counter 2 low byte
SCON	Serial Control
SBUF	Serial data Buffer
IEEE	Institute of Electronics and Electrical Engineers
WPAN	Wireless Personal Area Network
AES	Advanced Encryption Standard
FFD	Full Function Device
RFD	Reduced Function Device
LOS	Line of Sight
CTS	Clear to Send
RTS	Request to Send
DIN	Data In
DOUT	Data Out
UART	Universal Asynchronous Receiver and Transmitter
BD	Baud Rate
CE	Coordinator Enable