Dedication :

This thesis is dedicated to my parents, who have supported me all the way since the beginning of my studies.

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First I am thankful to Almighty ALLAH, who gave me strength to finish this thesis.

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Abstract:

Remote patient monitoring lead to improve quality of patient care on general hospital wards,and it refers to a wide variety of technologies designed to manage and monitor a range of health conditions, remote patient monitoring (RPM) has shown itself as a viable option and it could even become a standard clinical pathway.

duty personal care assistants, the observer's sole responsibility is a notify staff when the patient engages in happen self-injurious behavior, such as getting out of bed without assistance or pulling out tubes and nurses cannot be stable at the centralized nursing station to view patient vital signs and the status of medical equipment in the patient's room — from ECG machines to respirators and more.

System remote patient monitoring provides patients full control of their rooms and reduce the movement of nurses in hospitals and medical facilities and intensive care unit, as well as follow-up of patients in remote hospitals, for surveillance their situation to determine the medical needs them by a specialist doctor even easier for Medical staff provide the necessary medical needs.

In this thesis programmed PLC SIMATIC S7-200 to control and operate the stepper motor then proved on it camera wireless is rotating round the patients to monitor their conditions and it connected to computer via access point and used internet protocol (IP) technology to enable the doctors and nurse to see and talk with their patients on video remotely in any place.

Resulting in more effective and efficient care for patient and remote patient observation system can complement the role of nurses in monitoring patients by vide, they will be able to focus on holistic needs of patients thereby providing better personal care.

المستخلص :

مراقبة المرضى عن بعد تؤدي الي تحسين جودة رعاية المرضى في أجنحة المستشفى العام, وتشير الي مجموعه واسعه من التكنولوجيات المصممه لادارة ورصد مجموعه من الظروف الصحيه وتقنية رصد المرضى عن بعد فرضت نفسها كخيار مناسب وانها يمكن ان تصبح معيار للطرق السريريه .

واجب مساعدي الرعاية الشخصية، ومسؤولية المراقب هو إعلام الموظفين عندما يشارك المريض في أن يحدث السلوك المضر بالنفس، مثل الخروج من السرير دون مساعدة أو سحب الأنابيب والممرضات لا يمكنهم أن يكونومستقر ين في محطة التمريض المركزية لعرض المريض الحيوية علامات وحالة المعدات الطبية في غرفة المريض – من أجهزة تخطيط القلب أجهزة التنفس الصناعي وغيرها.

نظام مراقبة المرضى عن بعد يوفر السيطرة الكاملة المرضى من غرفهم والحد من حركة الممرضات في المستشفيات والمرافق الطبية وحدة العناية المركزة، وكذلك متابعة المرضى في المستشفيات النائية، لمراقبة حالتهم لتحديد الاحتياجات الطبية لهم من قبل الطبيب المختص حتى يسهل على الطاقم الطبي توفير الاحتياجات الطبية اللازمة.

في هذا النظام يستخدم تحكم منطق البرمجه للتحكم في تشغيل الموتور الذي ثبت عليه كاميرا لاسلكيه تدور حول المرضى لرصد احوالهم وتوصل الي الحاسوب عبر نقاط وصول وتستخدم تقنية برتكول الانترنت لتمكين الاطباء والممرضات من التحدث ورؤية مرضاهم على الفيديو في أي مكان.

والنتيجه أكثر فعاليه ورعايه فعّاله للمريض وهذا النظام يكمل دور الممرضات في رصد المرضى عن طريق الفيديو وانها تكون قادره على التركيز على الاحتيجات الشامله للمرضى وبالتالي توفير رعايه صحيه افضل.

Table of Content

الايه..... I

Dedication..... II

Abstract..... III

المستخلص..... IV

Acknowledgements..... V

Table of Content..... VI

List of Figures..... VII

List of Tables..... VIII

Abbreviations..... IX

Chapter one

1.Introduction 2

1.1Telemedicine Defined..... 2

1.1.1 Services Can Be Provided By Telemedicine..... 4

1.1.2 Delivery Mechanisms Can Be Used..... 5

1.1.3 The Benefits of Telemedicine..... 5

1.2 Problem statement..... 6

1.3 Objective..... 7

1.3.1 General objective..... 7

1.3.2 Specific objective..... 8

1.4 Methodology..... 9

1.4.1 SIMATIC S7-200(PLC)..... 10

1.4.2 Camera wireless..... 11

1.4.3 Stepper Motors and Drives..... 12

1.5 Research plan……..... 12

Chapter Two

2. Literature Review……..……..……..... 15
2.1 A Wireless PDA……...……. 15
2.2 Mobile Phones for Mother and Child Care……...…… 16
2.3 Remote Patient Monitoring in China……..…….…..... 17
2.4 Remote Non-Intrusive Patient Monitoring……..……. 18
2.5 Code Blue…….……. 19
2.6 An Advanced Wireless Sensor Network…….……..…..…. 20
2.7 Internet Based Monitoring…….……..……..... 21

Chapter Three

3. Electronic Circuit Design ……..…….…… 28
3.1 SIMATIC S7-200(PLC)……..……. 29
3.1.1 Driver with PC Access…….…… 30
3.2 Secur View Wireless N Day/Night Internet Camera…….…… 31
3.2.1Overview……..……..…….…. 31
3.3 Stepper motor…….…….…… 32
3.3.1 Introduction to Stepper Motors and Drives……...…..…..……. 32
3.3.2 Stepper Motor Advantages……..…...…...…... 33
3.3.3 Types of Step Motors……..…..…….....…..…... 33
3.3.4 Step Modes……..……..……...….. 34
3.3.5 Linear Motion Control……..……..…….. 36
3.3.6 Series vs. Parallel Connection……..……...……...… 36
3.3.7 Driver Technology Overview……..……..……...…..…… 37

Chapter four

4. Introduction to Programmable Logic Controller……..... 40
4.1 Application of PLC……..…….…… 40
4.2 PLC Component……...…….….. 41
4.3 PLC scan cycle…….……..…. 44
4.4 The Cycle time PLC …….……..…….….. 45
4.5 Advantage of PLC…….……..……..... 45
4.6 disadvantage of PLC……..…..…….…… 45
4.7 PLC size……..……..……...… 46
4.8 PLC programming……..…….……..….... 46
4.9 PLC company……..……..... 47
4.10 SIMATIC family…….……..……..… 47
4.1 S7-200 micro PLC……..…….……...……. 47
4.12 programing language of PLC …….……..……... 49
4.12.1Nemonic Instruction……..... 50
4.12.2 Sequential Function Charts (SFC)…….…….…. 50
4.12.3 Structured Text (ST)…….…… 50
4.12.4 Function Block Diagram (FBD)…….…….. 50
4.12.5 Ladder Logic…….……... 51
4.13 The Program In Ladder Logic Diagram Language…….…… 54

Chapter Five

5. Result and Discussion……...…….…..… 61
5.1 Result…….…….…….. 61
5.2 Discussion…….…… 62

Chapter Six

6. Conclusion and Recommendation……..…….…….... 64

6.1 Conclusion…….……..... 64

6.2 Recommendation……...……..... 65

6.3 Reference…… 66

6.4 Appendix……...…. 72

.

List of Figures

Fig 1-1	Block diagram of design PLC …….……..	10
Fig 3-1	Electronic Circuit Design…….……	2
Fig 3-2	Wireless N Day/Night Internet Camera……..…	31
Fig 3-3	Stepper Motor…….……	32
Fig 3-4	1.8° Hybrid Motor…….....…	34
Fig 3-5	Linear Motion Control…….…….…….……	36
Fig 3-6	Series connection of motor …….……...…	37
Fig 3-7	Parallel connection of motor……....……	37
Fig 4-1	The Application Of PLC…….……...…	41
Fig 4-2	How to connect power supply unit…….……	41
Fig 4-3	The Optical isolation in input unit…….……	42
Fig 4-4	The Optical isolation in output unit…….……	43
Fig 4-5	PLC System component…….…..…	44
Fig 4-6	Explain the Operation Cycle of PLC…….……..	45
Fig 4-7	Items for programming PLC…….……..……	46
Fig 4-8	Circuit program by ladder logic…….....……	54

Fig 4-9 Circuit program by ladder logic……..… 55

Fig 4-10 Circuit program by ladder logic……. 56

List of Tables

3-1 Table 4-1 S7-200 model specification ……48

Abbreviations

RPM	Remote Patient Monitoring
HIT	Health Information Technology
RDTF	Remote Diagnostic Testing Facility
PLC	Programing Logic Control
ATA	American Telemedicine Association
ICU	Intensive Care Unit
CMS	Centers for Medicare and Medicaid Services
WPS	Wi-Fi Protected Setup
PDA	Personal Digital Assistant
WLAN	Wireless Local Area Network
HR	Heart rate
ECG	Electrocardiography
SPO2	Blood Oxygen Saturation
PMNCH	Promoting Maternal, Newborn and Child health
ICT	Information and Communication Technology
UNDP	United Nation Development Programmer
WHO	World Health Organization
C/VD	Community and Village Doctors
MA	Medical Assistant
IP	Internet Protocol
ST	Skin Temperature
ASP	Active Server Pages
IE	Internet Explorer
CE	Comitia European

JVM	Java Virtual Machine
S/MEs	Small/Medium Size Enterprises
BAN	Body Area Networks
UMTS	Universal Mobile Telecommunication System
PC	Personal Computer
ICOST	International Conference on Smart Homes and Health Telematic
DMS	Data Management Systems
EMTs	Emergency Medical Technicians
WSN	Wireless Sensor Network
UVA	University of Virginia
GPS	Global position System
SQL	Structured Query Language
IEEE	Institute of Electronical and Electronics engineering
CGI	Common Gateway Interface
WAP	Wireless Application Protocol
HOVI	Home Audio Video Interoperability
TCP/IP	Communication Protocol / Internet Protocol
KPML	Key Press Markup Language
IMT	Intelligent Monitoring Terminal
MSD	Monitoring System Devices
DDNS	Dynamic Domain Name System
LCD	Liquid Crystal Display
GPRS	General Packet Radio Service
MCU	Microprogrammed Control Unit
GSM	*Global System for Mobile*

SMS	Short Message Service
DTW	Dynamic Time Warping
PLD	Programmable Logic Device
AMD	*Advanced Micro Devices*
PDP	Programmed Data Processor
LD	Ladder diagram
SFC	Sequential Function Charts
FBD	Function Block Diagram
ST	Structured Text
IL	Instruction List