International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395 -0056
Volume: 03 Issue: 06 | June-2016 www.irjet.net p-ISSN: 2395-0072

HANDY HEALTH STATUS

Sanjay Ankali, Assistant Professor
Aqeeb Sayad[1], Akshaykumar Pawar[2], Sneha Baddur[3] & Sudharani Kalgi[4]

[1,2,3,4]*Students, Department of Computer Science and Engineering*
KLE Society's KLE College of Engineering and Technology,
P. B. No. 16 Banantikodi Road Chikodi-591201.
DIST: BELGAUM, STATE: KARNATAKA, COUNTRY: INDIA

ABSTARACT

Telemedicine is a rapidly developing application of clinic medicine where medical information is transferred through the phone or internet or other networks for the purpose of consulting and performing remote medical procedures or examinations. Telemedicine can be applied to a greater extend in the field of cardiology where ECG serves as the major tool. This project elaborates the experience; a methodology adopted and highlights various design aspects to be considered for making telemedicine in patient monitoring system effective. In this method, the patient's vital signs like heart rate, blood pressure are captured and the values are entered into the database. It is then uploaded into the web based server and sent to the doctor's phone using ANDROID technology.

INTRODUCTION

The modern visionary of healthcare industry is to provide better healthcare to people anytime and anywhere in the world in a more economic and patient friendly manner. Therefore for increasing the patient care efficiency, there arises a need to improve the patient monitoring devices and make them more mobile. The medical world today faces two basic problems when it comes to patient monitoring. Firstly, the needs of health care's provider's presence near the bedside of the patient and secondly, the patient is restricted to bed and wired to large machines. In order to achieve better quality patient care, the above cited problems have to be solved. As the bio instrumentation, computers and telecommunications technologies are advancing, it has become feasible to design more portal vital sign tele-monitoring systems to acquire, record, display and to transmit the physiological signal from the human body to any location. Recent works in communication technologies have inspired the development of telemedicine to a large extent. Telemedicine benefits not only the customers who are able to receive health care more efficiently; it also benefits the doctors who can stream line their efforts to assist more patients[5].

LITERATURE SURVEY

[1] An android based monitoring and alarm system for patients with chronic obtrusive disease. © Gregory Koshmak, 2011

[2] International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (An ISO 3297: 2007 Certified Organization) Vol. 3, Issue 1, January 2014

EXISTING APPROACH

In the existing system, patient's parameters such as Temperature and Heart Beat will be monitored through wireless technology Zig-Bee. Depending on the size of the hospital, several such nodes might be required resulting in a much higher system infrastructure cost. A Zig-Bee node is connected to every patient monitor system that

consumes very low power and is extremely small in size. These slave nodes are specifically designed for low power consumption, with minimal circuit components. Moreover, such protocols are meant for moderate to high bandwidth applications where relatively large packets of data need to be transmitted and received. In the case of patient vital sign monitoring, the data packet size is much smaller and could be in tens of hundreds of bytes, which seems to suggest that networks using such protocols might seem impractical and it's obvious that we need a low power, low cost network nodes for such applications. To improve the accuracy and to increase the efficiency of the above processes a real time patient monitoring system based on Wireless Sensor Networks (using IEEE 802.15a) and a central ARM microcontroller is used. The data exchanged between the patient monitoring system and the microcontroller will be of a string format containing individual vital patient parameters like heart beat etc. separated by a delimiter. The response includes the complete patient record of the requested patient. The technology defined by the Zig-Bee specification is intended to be simpler and less expensive than other WPANs, such as Bluetooth[4].

Remote patient tele-monitoring system using Java enabled 3G mobile phone enables doctors to monitor the vital bio signal such as Heart rate, Blood Pressure and temperature.

Disadvantages of existing system

- Administrative workload is high.
- Misplacement of records.
- Searching the details about patient is time consuming.

PROPOSED APPROACH

Patient monitoring system is a process where a surgeon can continuously monitor more than one patient, for more than one parameter at a time in a remote place. With the development of Smartphone, it has performed a Smartphone based body monitoring system with a combination of the advantages of network technology and multiple sensor fusion technology. Body monitoring system greatly improves the operational capability of health care, such as remote operations, wireless health care so on. There has been a growing concern with technology of medical care which has developed rapidly and plays an increasingly important role in our life. The advances in information and communication technologies enable technically, the continuous monitoring of health related parameters with wireless sensor, wherever the user happens to be. They provide valuable real time information enabling the physicians to monitor and analyze a patient's current and previous state of health. Now days there are several efforts towards the development of system that carry out remote monitoring of patients. Traditional healthcare technologies mostly are confined to hospitals and other specific place, which is not convenient for the user's movement. It may also take lots of money. At present, several proposals have been used to concentrate to this issue. But they also suffer from some limitations mainly. Concerning single function of equipment and the potential radiation hazards by mobile phone direct contacting with the body. In order to solve the purpose of mobile medical care, we can use android Smartphone as a component of this system. Android mobile phone can not only receive the data collected by our hardware device but also can transmit these data to remote server in time. This method not only simplifies and speeds up the process of information acquisition, processing and analysis, but also declines costs of equipment; therefore, researchers have become more interested in wireless health care. Although many wireless standards can be used, there are important considerations such as range, throughput, security, ease of implementation and cost. The patient monitoring involves handling of sensitive data. These data should be transmitted securely without any intrusion.

Figure: System Architecture

Advantages of proposed system

Some of the advantages seen with handy health status are:

- To build simple user friendly and ready to use application.
- To allow users to build and host entire website online.
- To make web designing a quick affair.
- It saves the time of the patient.
- It saves the travelling charge of the patient.
- It helps the patient when the patient is in critical condition.
- Patient can see his health status by own.
- Patient can maintain his report in the application.
- When the patient is in critical state, the text message is send to the doctor and relatives automatically.
- This is very helpful for them who can't get the time for meet the doctor.

RESULT

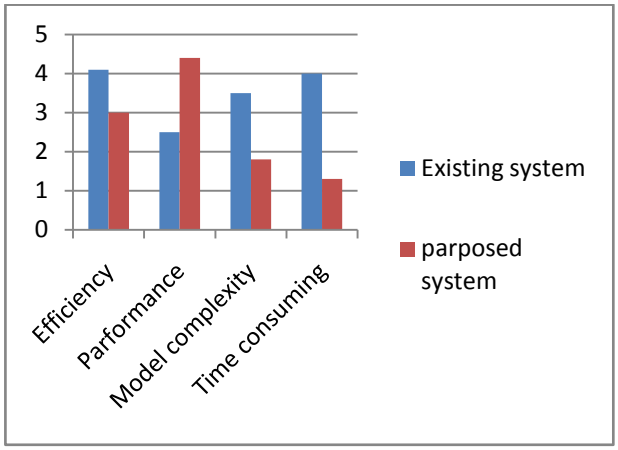

Figure: Graphical Representation of Result

METHODOLOGY

Implementation is the realization of an application or execution of a plan, idea, model, design, specification and there computer system. Many implementations may exist for a given specification or standard. For example, web browsers contain implementations of World Wide Web Consortium-recommended specifications, and software development tools contain implementations of programming languages.

Firstly, the needs of health care's provider's presence near the beside of the patient and secondly, the patient is restricted to bed and wired to large machines. In order to achieve better quality patient care, the above citied problems have to be solved. As the bio instrumentation, computer and telecommunications technologies are advancing, it has become feasible to design more portal vital sign tele-monitoring systems to acquire, record, display and to transmit the physiological signals from the human body to any location. Recent works in communication technologies have inspired the development of telemedicine to a large extent.

PROJECT MODULES

The system can be divided into three main parts:

1. Tele-monitoring and emergency detection system.
    - Tele-monitoring system consists of wrist worn devices.
2. Remote analysis system.
    - Remote analysis system consists of web server.
3. Tele-medicine system.
    - Direct interaction between doctor and patient.

CONCLUSION

The aim of this project is to continuously monitor the heart rate of heart transplanted patient and our project is to provide the doctor to find details of the patient records and patient can get the records of doctor, also patient can interact with the doctor, in one way it helps the patient to have the track of their health records if they possibly consult two or more different doctor

Our project is helps to message or inform the health status of the patient to their relatives whether the patient condition is critical or normal. The evidence points to the increasing levels of power theft in many countries and the financial losses for some system.

REFERENCES

[1] International Journal of Computer Science and Mobile Computing, A Monthly Journal of Computer Science and Information Technology, IJCSMC, Vol. 2, Issue. 5, May 2013, pg.191 – 201.

[2] International Journal For Technological Research In Engineering Volume 1, Issue 9, May-2014

[3] An android based monitoring and alarm system for patients with chronic obtrusive disease. © Gregory Koshmak, 2011

[4] International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (An ISO 3297: 2007 Certified Organization) Vol. 3, Issue 1, January 2014

[5] Tia Gao, Dan Greenspan, Matt Welsh, Radford R. Juang, and Alex Alm, "Real Time Patient Monitoring System Using Lab view", International Journal of Scientific Engineering Research,April-2012.