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# An Implementation of Health Checker and Social Sharing Of Healthiness Using Sensors

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**Abstract:** This paper presents the implementation of health checker using sensors and with the help of smart phones. The health monitoring device has become important in hospital in order to monitor and record the condition of the patient. In the proposed system the patients' health can be continuously monitored wherever the patients are and the acquired data is then transmitted to the medical center through wireless sensor network. It proposes a Secure and Privacy preserving Opportunistic Computing framework called SPOC. The applications include pervasive health monitoring and intelligent emergency management system. The proposed system integrates patient health monitoring for capturing several problems or symptoms and social sharing of the recorded information within the patient's community, aiming to facilitate disease management system. With the proposed SPOC framework, each medical user in emergency can achieve the user-centric privacy access control. With the help of GPS we can locate the patient in case of an emergency.

Keyword: Health Checker, Wireless sensor network, Body sensor network, SPOC, GPS.

## I. INTRODUCTION

The personal health systems and tools have been demonstrated enabling health information management by the patient. But, Self-management is often regarded as an essential part of efficient disease management, enhancing the patient's role and participation in healthcare services delivery. Patients are more benefited from self-management activities, in terms of understanding better their disease, enhancing their communication with their doctor, increasing their self-confidence. The patient is able to record certain information in regard with his/her health (e.g. a specific health condition) and share it with other patients of the community for purposes of emotional support, exchange of experiences and ideas, education, improved self-tracking. Patient willingness to share with others personal health data is a key prerequisite for achieving the goal .A new framework for the construction of mobile personal health systems based on the Personal Health Record (PHR) notion utilizing the acquisition of sensor data from available devices for health monitoring, the recording of health information, and external social networks functionality for sharing personal health information.

## II. SCOPE

The main functionality is offered by certain sites requiring constant on-line connectivity, while the integration with health monitoring infrastructures around the mobile user is still in its infancy. The unobtrusive logging and optional sharing of health information by the mobile users may be of great assistance towards effective (in terms of "anytime-anywhere") and collaborative disease management. A new framework for the construction of mobile personal health systems based on the Personal Health Record (PHR) notion utilizing the acquisition of sensor data from available devices for health monitoring, the recording of health information, and external social networks functionality for sharing personal health information. These systems are particularly targeted at chronic patients throughout their entire everyday activities are using portable health monitoring systems are highly aware of their disease, and may wish to play a more active role in their disease management. The framework supports the configuration of event-driven patterns so as to enable pervasively sharing information within the user's social group. Thus, an environment enabling pervasive and seamless communication between the patient and different actors (e.g.

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health professionals, relatives, similar patients, etc.) is constructed. A prototype implementation is presented where unobtrusive health monitoring with a wearable multi sensing device is applied, while a Service Oriented Architecture (SOA) is adopted for the communication among the mobile device, the back-end server and the external social networking platform.

## III. PROPOSED SYSTEM

In this paper, we propose a new secure and privacy-preserving opportunistic computing framework, called SPOC, to address this challenge. With the proposed SPOC framework, each medical user in emergency can achieve the user-centric privacy access control. It allows only those qualified helpers to participate in the opportunistic computing to balance the high-reliability of Patient Health Information (PHI) process and minimizing PHI privacy disclosure in m-Healthcare emergency. Introducing an efficient user-centric privacy access control in SPOC framework, which is based on an attribute-based access control and a new privacy-preserving scalar product computation (PPSPC) technique. It allows a medical user to decide who can participate in the opportunistic computing to assist in processing his overwhelming PHI data. This the patient feels comfortable by monitoring themselves at any cost.

### A. *System Architecture*

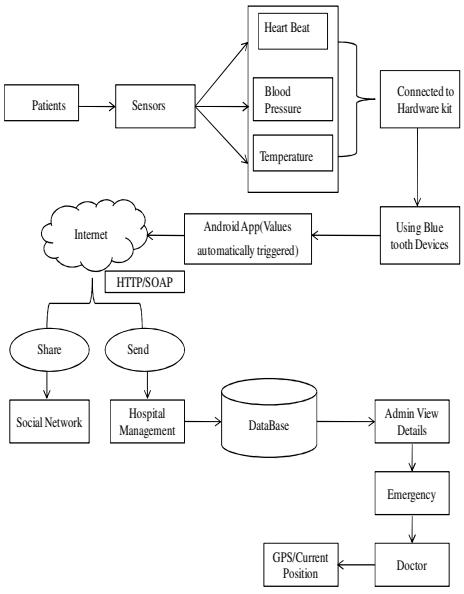


**Fig.1- Block diagram of proposed system**

### B. *Implementation*

**NetBeans IDE** is a modular developer tool for a wide range of application development technologies. The base IDE includes an advanced multi-language editor, Debugger and Profiler, as well as tools for versioning control and developer collaboration.

**SQLyog** provide us with powerful means to manage our MySQL databases.SQLyog is the most powerful MySQL manager and admin tool, combining the features of MySQL Workbench, phpMyAdmin and other MySQL Front Ends and MySQL GUI tools.

**Android Development Tools (ADT)** is a plugin for the Eclipse IDE that is designed to give us a powerful, integrated environment in which to build Android applications.

**Apache Tomcat** is an open source software implementation of the Java Servlet and JavaServer Pages technologies. The Java Servlet and JavaServer Pages specifications are developed under the Java community Process.

**Glassfish** is an open sourceapplication server project started by Sun microsystems for the java platform and now sponsored by Oracle Corporation.

**Proteus 8** is the best simulation software for various designs with microcontroller. It is mainly popular because of availability of almost all microcontrollers in it. We can simulate our programming of microcontroller in Proteus 8 Simulation Software. Proteus is a Virtual System Modeling and circuit simulation application.

### C. *Body Sensor Network*

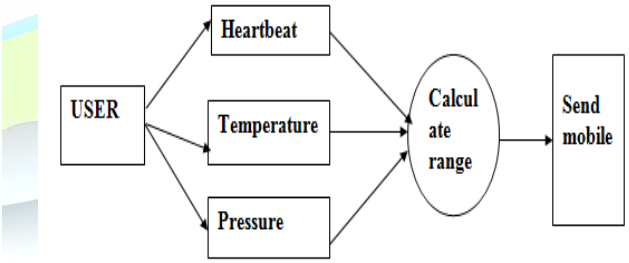


**Fig.2-Body sensor network**

The patients can be monitored using sensors to measure temperature, blood pressure and heartbeat rate and the calculated values will be sent to the patient's mobile phone via Bluetooth. It is needed that patient must have logged into the application made for monitoring. Then the patients can send or share the personal health records to medical server or with the patients' community.

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## IV. RESULTS

The below mentioned figures shows that the implementation of the monitoring systems at both medical server and patient.Fig.3 shows that how the patient details are viewed at the administrator in the medical service. This shows the patient's name list, health status, and we can locate the patient using view map. With the help of GPS the patient can be treated even if the patients are far away from the hospital. The patient can be referred to the nearer hospital. The administrator at the medical side must continuously monitor the health status of the in-patient or the out-patient if it is needed.


| Patient Name | Body Pressure | Body Temperature | Updated Time | Geo Location |
|---|---|---|---|---|
| FAMITHA | 110 | 56 | 18 | view map |
| Nazreya | 100 | 45 | 3 | view map |
| ranjith | 34 | 34 | 12 | view map |
| san | 120 | 35 | 12 | view map |

**Fig.3-Patient Details**

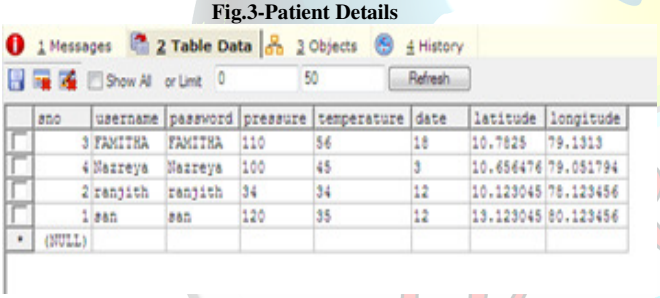


**Fig.4-Database Management**

The fig.4 shows that the values are encrypted and stored in the temporary server.

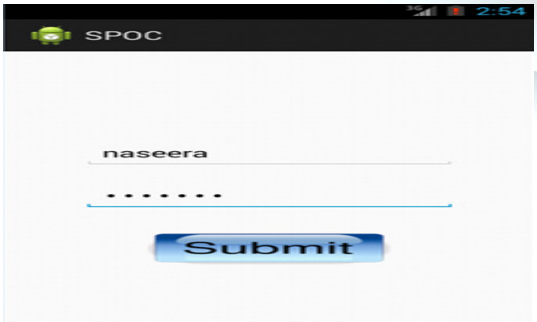


**Fig.5-User Authentication**

Fig.5 shows that how the patients are authenticated into the applications which is specially created for patient monitoring system. This figure shows that every users in this system are given with a username and password. The patient can log on to the application made for the monitoring system with their respective usernames and passwords.

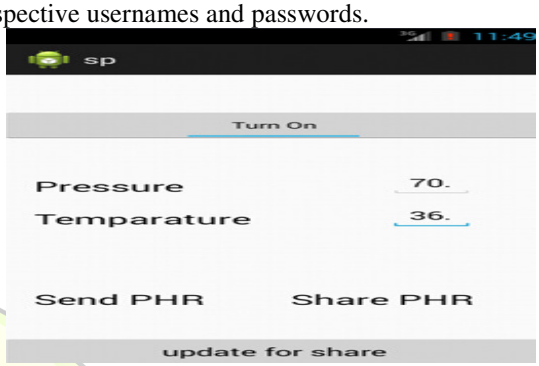


**Fig.6-Values automatically trigerred**

Fig.6.shows that how the values are automatically triggered in the mobile phones via bluetooth. Once the patients are successfully log on into it, the values received from the patient body is then automatically triggered.

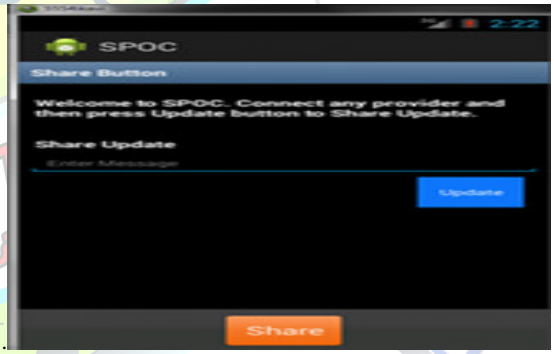


**Fig.7-UpdatingHealth Status**

The fig.7 shows that the patient can share their health status. The patient can also share their health satatus whenever they wish to update the status with the patient community once the patient opened the social network. We can update each time to get the new datas and send along with the message and click on the button update.


**Fig.8- Social sharing**

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The fig.8 shows how the patient can share their health status in social networks. The patient are able to share in any social networks they wish to share. Also, they can update the status whenever they wish to update the health status in the social networks which they have opened already.

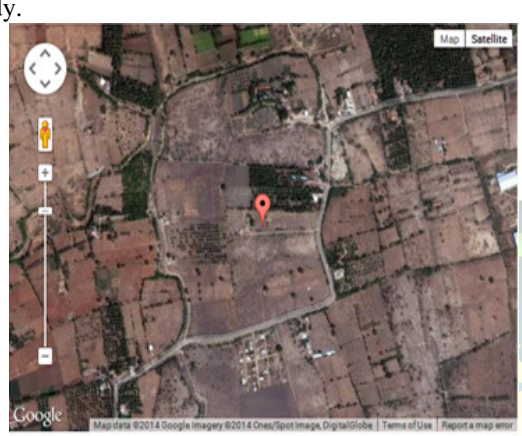


**Fig.9- Locating Patient**

The fig.9 shows that the location of the patient can be identified with the help of GPS.

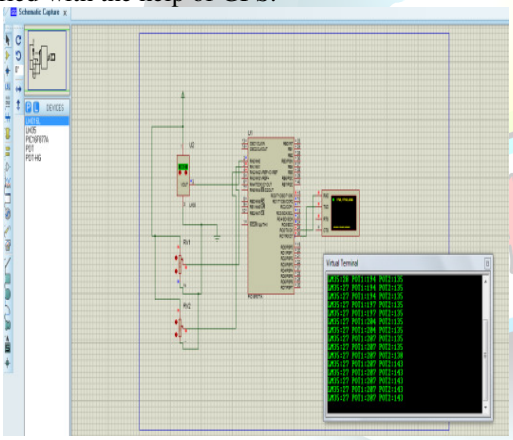

**Fig.10-Hardware Verification**

The fig.10 shows that the hardware design can be verified using the software proteus. This is very helpful as we can check whether the design is working properly or not. The software checks how it responds for the increasing and decreasing data. Before the hardware is designed manually, we can check it out the working principle satisfies or not.The advantages of the health monitoring system are more in this model. Social sharing is the main role of this implementation. The people are more active in social networks and so the response and updating will me much efficient in this model. It is noted that sharing with the patient community or with their friends are entirely depend on the patient willingness. Also, it has mentioned that the patient have their own user name and password. Hence the privacy is more in this system. Patients are more benefited from this model as well as the monitoring process is well being used at all the emergency situations.

## V. CONCLUSION

Thus this paper proposes the system that shifts clinic-oriented, centralized healthcare system to a patient oriented, distributed healthcare system and also it is very helpful for the earlier detection of the vital symptoms. It provides pervasive health monitoring and it encourages self-management activities and sharing within the patient's community. With the help of GPS, we can locate the patient in case of emergency. We can refer the patient to the nearer hospital in case of an emergency.

## REFERENCES

[1]. Shyamal Patel, Konrad Lorincz, Richard Hughes, Nancy Huggins, John Growdon, David Standaert, Metin Akay, "Monitoring Motor Fluctuations in Patients With Parkinson's Disease Using Wearable Sensors", IEEE Transactions On Information Technology In Biomedicine, Vol. 13, No. 6, November 2009

[2]. Yonglin Ren, Richard Werner Nelem Pazzi, and Azzedine "Monitoring Patients Via A Secure And Mobile Healthcare System", IEEE Wireless Communications • February 2010

[3]. Hairong Yan, Hongwei Huo,Youzhi Xu and Mikael Gidlund,"Wireless Sensor Network Based E-Health System Implementation and Experimental Results", IEEE Transactions on Consumer Electronics, Vol.56, No. 4, November 2010

[4]. Fangs Zhou, Jianxin (Roger) Jiao, Songlin Chen and Doing Zhang, "A Case-Driven Ambient Intelligence System for Elderly in-Home Assistance Applications" , IEEE Transactions On Systems, Man, And Cybernetics—part C: Applications And Reviews, Vol.41, No. 2, March 2011

[5]. Ming Li, Shucheng Yu, Yao Zheng, Kui Ren,and Wenjing Lou, "Scalable and Secure Sharing of Personal Health Records in Cloud Computing Using Attribute- Based Encryption", IEEE Transactions On Parallel and Distributed Systems, Vol 24, No.1, January 2013.