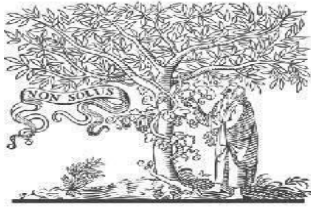


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## A RELIABLE e-CAREGIVER SMART SYSTEM USING IoT

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**Abstract:** Advances in technologies of information and communication have led to the emergence of Internet of Things (IoT). In the modern health care environment, the IoT technology is used to bring the convenience of physicians and patients, since they are applied to various medical areas such as real time monitoring, health care management and patient information management. Medbox is one of the healthcare system in IoT technology, where the patient is monitored continuously using a collection of lightweight wireless sensors and to provide personalized medication. However the development of this IoT technology over health care systems affects the patient privacy. In this paper, we highlight the major security requirements and avoidance of false alarms. Our aim is to obtain a device in order to achieve high quality, cost effective and secure patient-centric monitoring along with some potential solutions.

### I. Introduction:

Internet of things (IoT) is actually a cyber-physical systems or a network of networks. It is envisioned with huge number of things/objects and sensors/actuators connected to the internet. Via heterogeneous access network technologies such as radio frequency identification (RFID), wireless sensor networks and semantic web services, etc. The automatic real-time data flow is produced by connecting things with the sensors. The main purpose of using internet of things in medical application is due to two key aspects, 1. To obtain real-time monitoring over patients, and 2. To check whether the patient is following the instructions or not. IoT makes possible to monitor in real time, run remote diagnostics, provide virtual hands – on support, automate replenishment and analyse utilization. In healthcare system, IoT involves many kinds of sensors (wearable, implanted, and environment) that enables the people to enjoy modern medical healthcare services anywhere and anytime.

Boyi Xu and Li Da Xu [8] proposed a system to access big data in heterogenous format. Phillip [12] provided the importance of IoT in healthcare applications. Prasanta Gope and Tzonelih Hwang [4] developed an IoT-based modern health care system using Body Sensor Network. The paper [3] provided a detailed study on types of sensors. The author [6] provided the definition and various features of RFID technology. The author [12] provided a way to improve the quality of health monitoring system.

An IoT based smart system [5] is implemented to measure the heartbeat of the cardiac patient. The paper [13] proposed an M-Health system for diabetic patient. Geng Yang, Li Xie, Matti Mantysalo and Xiaolin Zhou [9] provided a health monitoring system, especially for an elderly people suffering from chronic disease. The author [16] implemented an event-based techniques to monitor the patient's health. V.Manju and Abeera V.P [14] delivered a secure health IoT using Med box and Zigbee protocol. P.Raga Lavima and Mr.G.Subhramanya Sarma [18] used a bio-medical sensor to measure the bio-signals and Wi-Fi is used to transmit the signal to the receiver. The paper [15] uses Med box and sends an SMS alert when the signal is abnormal.

## **II. Proposed System:**

Our proposed med box is based on users whoever will have taken drugs or medicine on regular basis. This med box specify the pill quantity and count for each day. This notifies the users when the pill had to be taken. Our smart med box is designed for different age groups of people. The objective of the proposed architecture is to provide the user proper healthcare using IoT and various supporting technologies like body sensor network, WSN.

### **Conclusion:**

Thus the system proposed will act as a efficient, reliable e-Caregiver integrating the advantages of IoT sensor inter networking, android app and unambiguously be a smart system for day today application and a reliable usage.

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