Smart Health Care Pathology

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Abstract. Wireless sensor networks have wide use in different fields such as medical, military defense. This paper discusses the primary hidden protection framework for data privacy. The hidden key, remote node, and base station are used to connect and hack through secrets. We used fiber labeling technologies to secure data transmission between the base station and the far node. We combined those techniques with Data slice, homomorphism, data privacy and data security defense encryption technology. The only way to obtain more than a sufficient number of different secrets that can decode data from base station to remote node. To order to protect data privacy, the homomorphism encryption technology sets up a safe and powerful network of wireless sensors.

Keywords: Heartbeat, pressure, temperature sensors, Arduino plate, UART, HC05, LM35, PC.

1. Introduction

Nowadays, time is a precious tool that can create a difference in life and death. We also chosen to deal with EMS response time, one of the most critical facets of contemporary medicine, in order to explain this fact. A new infrastructure for advanced coordination between medical equipment and physicians is a must in general medical environments. Developments in the field of ICT have resulted in the use of easy and efficient communication services such as the internet [1]. The Internet of Things is described as the ability of different things to communicate over the internet [9,10]. The key thing is to give the enterprise solutions without level of comfort in an energy-efficient and reliable way [2].

2. Literature survey
Robust healthcare is required for developed countries. Developing countries such as Indian healthcare are high and stable, and privacy is a critical issue [3]. Rigorous healthcare procedures are required in hospitals to cope with the mass population. Doctors regularly visit the patients for status check. The situation may occur as if nurse were making mistakes while recording the study. Use multiple data servers are used to store patient data, which is a realistic solution to avoid an internal attack. The health system's main aim is to securely deliver the health reports through the app to the user [4,5]. Different varieties of sensors are used to detect pressure, humidity, heartbeat and pressure which are very useful to the health care [6-8].

3. Heartbeat sensor
The sensor is designed to deliver the analog data from heartbeat. When a finger is positioned on the heartbeat sensor, it is programmed to provide electronic pulse. The heartbeat sensor is connected to Bluetooth and mobile phone display.

4. Pressure sensor
A pressure sensor is a device that detects pressure and converts it into electrical signals where the signal quantity depends on the pressure detected.

5. Temperature sensor
The LM35 produces a higher output voltage than the thermocouples, and may not require simplified output voltage due to water level trimming. It functions in the range of 4V to 30V.

6. Proposed system
By using multiple data servers to store patient data, the doctor can access patient medical data directly from the patient via Bluetooth device to android mobile. This is a practical approach for preventing the inside attack. The aim is to safely spread patient data across individual data servers and use cryptosystems to conduct patient data analysis without violating the privacy of patients. They discuss health monitoring compliance requirements using medical sensor networks and recommended a stable frame work called "SHM" using wireless sensor networks.

7. Block diagram
We use an Arduino board to make machines that are more able to sense and control the mobile desktop physical world. It is a range of physical programming system based on a simple microcontroller board and a development environment for code writing. Arduino can be used to create various types of objects which take inputs from numerous switch and sensors and monitor a range of lighting, engines and other physical outputs. The Arduino microcontroller can be used conveniently on the more powerful single microcontroller board computer that has gained significant popularity in the professional market. It has 14 digital inputs and six pins for output. The flow diagram description is illustrated in Fig 1.
For the production and installation of programs microcontrollers depend on a host computer. The host software is called an integrated development environment or IDE. For Arduino, the evolving environment is based on the open source Processing framework (www.processing.org) which its developers define as the "language programming and environment for people who want to program images, animations and interactions." Arduino is a well-fashioned C script. Arduino Uno has a range of device connectivity, Arduino or other microcontroller equipment. The UART TTL (5V) serial on 0 (RX) and 1 (TX) pins are given by ATmega328. An ATmega16U2 on the board transmits serial communication through USB and is a virtual com-connection on a computer. The 16U2 firmware uses the regular USB COM drivers and there are no other drivers. The wireless library program allows remote connectivity on any digital pin of the Uno. I2C (TWI) and SPI connectivity are also enabled in the ATmega328. A library for simplifying the use of the I2C bus is included in the Arduino program. Use the SPI catalogue to interact with SPI. The Arduino supports the notion of libraries like most C-based languages. The opportunities for intelligent healthcare, in short, are enormous. Smart health care will promote better self-management of the health for individual users. The results are shown in Fig 2, 3 and 4.
Fig 2. Arduino COM port

Fig 3. Compilation of program in Arduino
Fig 4. Bluetooth terminal HC 05

9. Conclusion
The opportunities for intelligent healthcare, in short, are enormous. Smart healthcare will promote better self-management of the health for individual users. Appropriate and appropriate medical services can be obtained when necessary, and the medical services material will be more personalized. Intelligent healthcare will cut costs for medical institutions, ease staff pressure, achieve cohesive resources and knowledge.

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