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Body Sensor Network For Pregnancy Women

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Abstract

In recent technologies is to allow to build body sensor network in on human body. After eight month of pregnancy women usually the person consults with doctor for regular checkup. We introduce the interface of the IEEE 802.11 standard can be caused by simultaneous transmission. This paper has to implement by using the body sensor network for pregnancy women. The data of patients and remote monitoring.

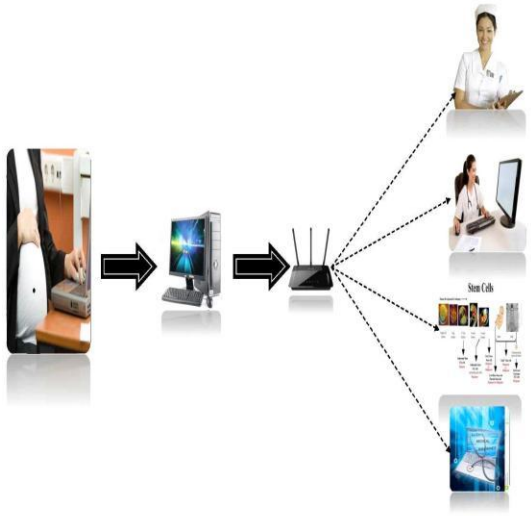
We focus on Ethernet technology finally us innovative medical applications of sensor network in health care system. In my paper no need to visit doctor after eighth month instead of that we proposed portable devices such that blood pressures, body temperature, pulse rate, baby movement and baby heart beat and integrated wireless technology, these wireless devices continuous and pervasive medical monitoring is now available with the present of wireless healthcare system and telemedicine services and in that way finger print helps us to identify the sensor placed person.

Keywords: Body sensor network, medical application, Ethernet technology, IEEE 802.11 technology, finger print, healthcare system, wireless technology, remote monitoring.

Introduction

Body sensor network are approaches for a variety of application traffic free, loss of power and security, many sensor network have critical session. In that we focus on medical application using body sensor we some portable devices are included such as blood pressure, body temperature, pulse rate, baby movement and baby heart beat are essential healthcare traditionally. A pregnancy woman should come to the hospital

periodically. Late in these technologies we just fix in body sensor to our pregnancy women body. In such way a patient no need to visit the doctor .the sensor are placed on patient and the measurement will pass to the ps and our result suggest packetized traffic must be handled in conjunction. Later all result will to the destinations such as nurse, doctor, insurance and stem cell collection.



In the eleventh stages of patients they used to admit to the hospital in such way, patients only can place their finger prints in the hospital. Than they can admit for delivery without any interaction. Because number of peoples can come to hospital for delivery in that way finger print helps us to identify the sensor placed person.

Literature Review

In the year 2010 Ming li and Wenjing Lou "Data security and privacy in wireless body area network" is proposed by the wireless body area network has emerged as a new technology for e- healthcare that allows the data of a patient‟s vital body parameters and movements to be collected by small wearable or implanted sensor and communication using short range wireless communicated technique instead of being measured face to face with WBANs patient‟s health-related parameters can be monitored remotely, continuously and in real time, and then processed and transferred to medical database[1].

In the year of December 2004 Elaine Shi and Adrian Perrig "Designing Secure Sensor Network" is proposed by sensor networks are a promising approach for a variety of applications, such as monitoring safety and security of buildings and space, measuring traffic flows, and tracking environmental pollutants. Sensor networks will play an

pervasive computing, as our personal mobile devices will interact with sensor network in our environment.[2]

In the year of September 1997 Brian P. Crow "IEEE 802.11 Wireless Local Area Networks" is proposed by performance investigation reveals that an IEEE 802.11 network may be able to carry traffic with time bounded requirements using the point coordination function however our findings suggest that packetized voice traffic must be handled in conjunctions with an echo canceller[3].

In the year of December 2004 Arif onder ISIKMAN "Body area network" is proposed by the key aspects of body area networks and one application of body area networks covering different network structure and proposed a hybrid method for body area networks and introduce the new IEEE802.15.6 standard and compared with similar standards. They show numerical results for a lifetime optimized body sensor network requiring a transmission free area. It status that trade-off-between reliability vs. security [4].

In the year of December 2013 Rajasekaran, kumaran, premnath and karthick was published the „Human health monitoring using wireless sensors network(WSN) is proposed by monitor the patient details in periodic interval is on overhead using existing technologies. In general six different sensors are used to gather patient medical information without being infecting inside the body like portable devices such as heart rate monitors, pulse ox meters, spirometers and blood pressure monitors are essential instruments in intensive care. Integrated wireless technology, these wireless devices continuous pervasive medical monitoring is now available with the present of wireless healthcare system and telemedicine services [5].

Related Work

Security Requirements

This paper has been secured and safety requirement for that we are using public key and private key, while sending a node, third party can have our data so that we are using public key, First the related person wants still see the data in that way the authenticate person should create a public key and sends the data secured public key to the related person‟s mail and the authenticate person also create a private key and sends to the mail. If the third person can‟t visit the data because all the data will be in cipher text so that have to change with the plain text,then the related person gets the public key from the mail and gives it to the authentication purpose then gets the private key from the mail and gives the private key then obviously it changes the related person can visit all the datum from the cipher text to the plain text.

Authentication:
A shared wireless communication can appeared based on sensor network it enables to detect malicious inject, so that have to verify origin of data that is some authentication and data authentication In our failure of nodes, which means by sending a nodes, to failure can be happen such as time delay, blockage problem and overloaded. To overcome this problem we propose cluster head mechanism. By using this cluster head mechanism, groups of nodes form a cluster. Each cluster has only one controller in it the communication with each node is controlled by cluster head and it also updates the nodes. This controller is known as cluster head sends the data to another cluster head like sending data from source to destination. This will be powerful method for sending the data by this method we control late delay, blockage problem and overloaded.

Interface of Ethernet 802.11:
Interface in wireless communication can be caused by simultaneous transmission

Frequency allocation:
In case wireless network requires all users can operate a common frequency band, which means it licensed with all other country.

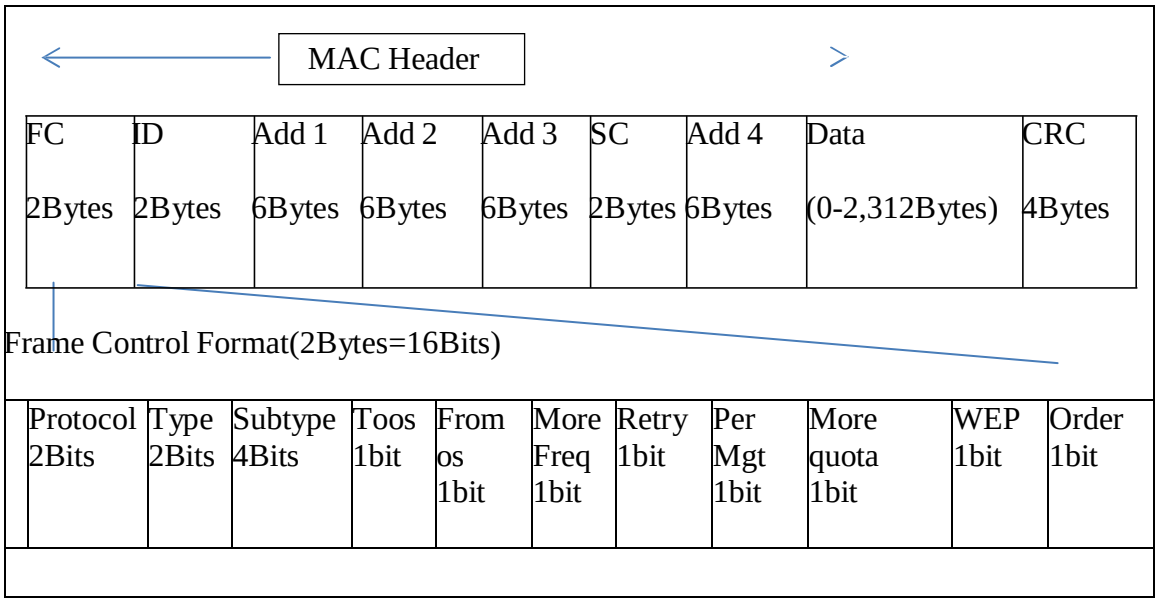
Interface:
Two or more person sharing at the time of the same frequency, the collision can occur. To overcome this problem, it proposes with ieee 802.11 interface by using this interface, the person who activate with the frequently allocated can be operate with the frequency, it makes it idle

Packetized data:
While sending data with this frequency allocation. It can be packetized me, because a cluster can have a lot of nodes, the person can send a nodes with throughput, in that way it can be overloaded with the limited capability. But while sending data through this, it packetized all the data together an sends a nodes to the destination without time delay. It must be reached a nodes with the time bounded and avoids traffic also probably by sending a node with throughput, obviously traffic can be occur with a lot of node overloaded with are part. In such cases, packetized data helps with frequency allocation, it controls traffic and reaches to the destination with the time-bounded capability.

IEEE 802.11 Frame Format
IEEE 802.11 supports three different types of frame: management, control, and data. The management frames are used for station association and disassociation with the AP, timing and synchronization, and authentication and de authentication. Control frames are used for handshaking during the CP, for positive acknowledgments during the CP, and to end the CFP.

Data frames are used for the transmission of data during the CP and CFP, and can be combined with polling and acknowledgments during the CFP. The standard IEEE 802.11 frame format. That the frame body (MSDU) is a variable-length consisting of the data payload and octets for encryption /decryption if the optional wired equivalent privacy (WEP).protocol is implemented. The IEEE standard 48-bit MAC addressing is used to identify a station. The 2 duration octets indicate the time (in microseconds) the channel will be allocated for successful transmission of a MAC protocol data unit (MPDU). The type bits identify the frame as control, management, or data. The subtype bits further identify the type of frame (e.g., clear to send control frame). A 32-bit cyclic redundancy check (CRC) is used for error detection.

IEEE 802.11b MAC Frame Format



Availability

It has been providing availability requires that the body sensor network be functional throughout its lifetime. All the attacks have been overtaking with our proposed requirements security. Sensor nodes have passed to the doctor, nurse, insurance company and stem cell collection through modem and Ethernet ieee 804.11.

After getting a sensor node from Ethernet, nurses have to verify all the results from their certain patients, those messages will pass to the doctor and also doctor can get patients results from their lists insurance company will get the patient‟s information, if patient gets insurance during pregnancy and helps them by giving the insurance amount when patient admits to the hospital. Patient should intimate to the stem cell collection department. Because of collecting stem cell they will come and collect the patient‟s stem cell after delivery period of pregnancy women. If the stem cell which is present in the

umbilical card of baby that the stem cell presented for further process, it helps to stop more than 12 types of blood related diseases.

Conclusion

In this paper we introduce the recent technologies is to allow to build body sensor network in on human body, after eight month of pregnancy women, and application of portable devices for gathering the data of patients and remote monitoring and using the interface of IEEE 802.11 can be caused by simultaneous transmission and frequency allocation, in that way finger print helps us to identify the sensor placed person, throughput analysis for lifetime optimized body sensor networks is considered as future work.

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[5] Arif onder ISIKMAN "Body area network" from this materials in the final report of group 6 of the course SSY145 wireless networks.

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