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Using real time communication provide emergency treatment and hospital searching via IOT Based system

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Abstract : *The Internet of Things (IoT) has been widely used to interconnect the available medical resources and offer smart, reliable, and effective health care service to the people. Health monitoring for active and assisted living is one of the paradigms that can use the IoT advantages to improve the old lifestyle. We present an IoT architecture designed for healthcare applications. The system collects the data and relays it to the cloud where it is processed and analyzed. Feedback actions based on the analyzed data can be sent back to the user. A prototype of the proposed system architecture has been built to demonstrate its performance advantages. This proposed system is able to send emergency information for an ambulance to a nearby hospital after searching and availability. Most important features of the system are when an ambulance meets a victim the system takes some of its initial details using thumb scan and starts nearest hospital searching as per victim situation and Send request to hospital about availability. If availability is there, then send details them immediately to the hospital room.*

Key Words: **Wireless Communication, Mobile applications, Hospital system, Finger Print Data Access, Blood Management, Nearest Search**

1. INTRODUCTION

In daily life, human doesn't take care about own health just focusing on daily work. So don't care about health or extend or ignore health issue, so they affected or created a new type of health issue rapidly increases. At that level, there is no emergency level facility available including real time communication, so within an ambulance facility and hospital doesn't provide immediate care to victims of accidents before training medical workers arrive. As per the Victims Current situation, there is nothing facility available in an ambulance, which suggest the care taker nearest hospital searching and Doctor availability. We proposed Effective real-time communication and location finding system using android application. Which gives real time communication in between ambulance and Hospital.

2. Literature Survey:

Paper Title: Ubiquitous Data Accessing Method in IoT-Based Information System for Emergency Medical Services

Description:

The rapid development of the Internet of things technology makes it possible for connecting various smart objects together through the Internet and providing more data interoperability methods for the application purpose. Recent research shows more potential applications of IoT in information intensive industrial sectors such as healthcare services. However, the variety of the objects in IoT causes the heterogeneity problem of the data format in IoT platform. Meanwhile, the use of IoT technology in applications has spurred the increase of real-time data, which makes the information storage and accessing more difficult and challenging. In this analysis, first a semantic data model is proposed to store and interpret IoT data. Then a resource-based data accessing method is designed to take and process IoT data ubiquitously to improve the accessibility to IoT data resources. Finally, we present an IoT - based system for urgent medical services to demonstrate how to collect, integrate, and interpret IoT data flexibly in order to provide support to emergency medical services. The result shows that the resource-based IoT data accessing method is effective in a distributed heterogeneous data environment for supporting data accessing timely and ubiquitously in a cloud and mobile computing platform.

Paper Title:

The Internet of Things in Healthcare Potential Applications and Challenges

Description:

The Internet of Things is a collective term for any one of the many networks of sensors, actuators, processors, and computers connected to the Internet. Healthcare applications for the IoT can potentially deliver comprehensive patients care in different settings, including acute (in-hospitals), long-term (nursing homes), and community-based (in-homes). An IoT has the potential to accurately track people, equipment, supplies, service animals and analyze the data which is captured by devices(sensor/ camera). Sensors attached to patients to measure vital signs and other bio-metric information, problems could be more rapidly diagnosed, a better quality of care given and resources used more efficiently.

Paper Title:

User-Defined Privacy Grid System for Continuous Location-Based Services

Description:

In today's world of mobility and ever-present Internet connectivity, an increasing number of people use location-based services to request information related to their current locations from a variety of service providers. This can be the search for nearby points of interest (e.g. Restaurants and hotels), location aware advertising by companies, rush area information tailored to the highway and direction a user is traveling and so forth. The use of LBS, however, can reveal much more about a person to potentially untrustworthy service providers than many people would be willing to disclose. By tracking the requests of a person, it is possible to build a movement profile which can disclose information about a user's work (office location), medical records (visit to specialist clinics), political views (attending political events), etc. LBS can be very important and as such users should be able to make use of them without having to give up their location privacy. A number of approaches have recently been proposed for preserving the user location privacy in LBS. In general, these approaches can divide into two main categories. Fully-trusted third party (TTP). Famous privacy-preserving techniques require a TTP to be placed between the user and the service provider to hide the user's location information from the service provider. The main task of the third party is keeping track of the current location of all users and blurring a querying user's location.

Paper Title:

A multiple communication standards compatible IoT system for medical usage

Description:

In the development of IoT technologies, more and more media equipment's and sensors with wireless communication modules are deployed in the same domain. Wireless signal becomes week in air this is a serious problem which should be carefully managed. In our proposed system, we design a communication system model for medical equipment and IoT sensors. The system defines various communication priorities for different devices depending on the necessity of functions. In Some medical system, it sensors translate and receive the massive data every time and on the other hand, some equipment just translates the emergency signal for help calling. All these communication process should be treated separately to keep the efficiency of ISM band utility. The system has three patterns: (1) Devices with various communication standards can sense the existing of other devices.(2)Device can change its working state depending on the priority of itself and others. (3)This system will only change the MAC and upper layer of Device network stack and without touching the Physical layer

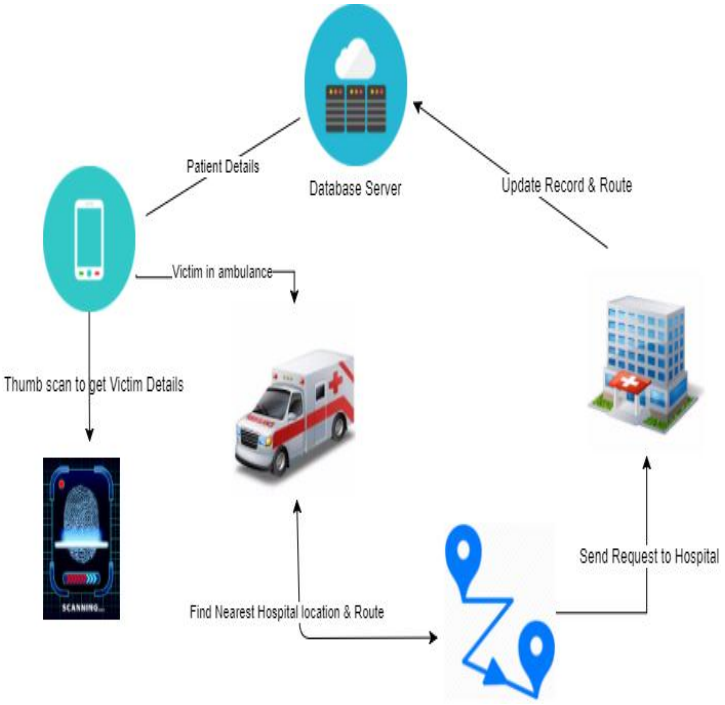
Paper Title:

IoT-Based Health Monitoring System for Active and Assisted Living

Description:

The Internet of Things has been widely used to interconnect the available medical resources and offer smart, reliable, and effective health care service to the elderly people. Health monitoring for active and assisted living is one of the paradigms that can use the IoT advantage to improve the old lifestyle. In our proposed system, we present an IoT architecture, customized for healthcare applications. The proposed architecture collects the data and relays it to the cloud where it is processed and analyzed. Feedback actions of data based on analysis can be sent back to the user. A prototype of the proposed system architecture has been built to demonstrate its performance advantages.

3. Architecture:



Module Wise Explanation:

Module 1: Ambulance Admin

Ambulance admin takes patients thumb impression and Ambulance admin might be search nearest hospital and send requests to the nearest hospital.

Module 2: Hospital Admin

In this technique hospital admin this module then very easy to find out nearest hospital

Online with the blood bank. In critical situation this application is very helpful.

Module 3: Blood Bank Admin

In this module blood bank admin receive request and check availability of the particular blood group.

4. GOALS

- To provide Victim Personal Details Data Set include Blood Group.
- To provide Finger Print Scan device to access victim data.
- To provide Nearest Hospital Searching as per victim situation.

5. OBJECTIVES

- Provide shortest distance
- Provide doctor availability as per requirement
- Provide blood donor as per requirement before reach at hospital.

6. CONCLUSIONS

This system able to send emergency information for an ambulance to a nearby hospital after searching and availability. Most important features of the system are when an ambulance meets a victim the system takes some of its initial details using thumb scan and starts nearest hospital searching as per victim situation and Send request to hospital about availability. If availability is there, then send details them immediately to the hospital room.

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