Electronic Health Record With Emergency Alert System Using Cloud Computing

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Abstract- *In this era where everything is been digitise. We came across new thing to make our country digitalised in form of medical field. Many countries have accept the importance of Electronic Health Record in HealthCare Management System .It also describes a mobile system that enables electronic healthcare data storage, update and retrieval using Cloud Computing. It observed that people in unknown area are in severe danger if they don't able to find hospital quickly. In emergency case a single minute counts so it is very important that automatic applications must be used for decision making, maintain up to date status of the hospital. Saving the time which can be save life of the patient. When the doctor or family receives the alarm message, they can immediately take measure to rescue the user. It can also manage the health record of the user. The user can take online medication to send their physical condition and then get prescription from doctor who will send the prescription on the user's phone. The proposed system locates nearest available hospital, contacts its ambulance emergency system, accesses a Electronic Health Record of emergency patient that can critically assist in pre- hospital treatments. The system will identify availability of the nearest available specialized hospital all through EMS server which provides continuous information about the incoming patient to the hospital.*

This paper proposes Android Based Tracking for EMS (Emergency Medical System) on cloud. Emergency Medical System (EMS) is a revolutionary approach to emergency medical treatment in some medical emergency and a QR which will over come the limitation of broke

Keywords- Introduction, Existing System, proposed System, Traffic control.

I. INTRODUCTION

The proposed system locates nearest available hospital, contacts its ambulance emergency system, accesses a Electronic Health Record of emergency patient that can critically assist in prehospital treatments. The system will identify availability of the nearest available specialized hospital all through EMS server which provides continuous information about the incoming patient to the hospital. The proposed mobile application which allows the emergency medical team to notify the hospital about the incoming victim's personal information and medical condition. And it also maintain the traffic control. (Emergency Medical System) on cloud.

A. USER GROUPS :

Our system is developed basically by health conscious personnel. The client will use this application to deal with the emergency he/she is facing. User classes are elaborated as below:

(a) Application User: The application will be used by the client itself in case of emergency to inform the relatives and search the nearest hospital.

It also provides a web-based system used by hospital staff to view the incoming victims. This paper proposes Android Based Tracking for EMS

B. Technical Expertise :

(a) Administrator- All confidential things are handled by the Administrator. He/She will only administrate whole system.

(b) DBA-Admin- All Database related things such as "Integrity", "Reliability", "Consistency" are handled by the DBA-Admin. He/She will only administrate Database Management System.
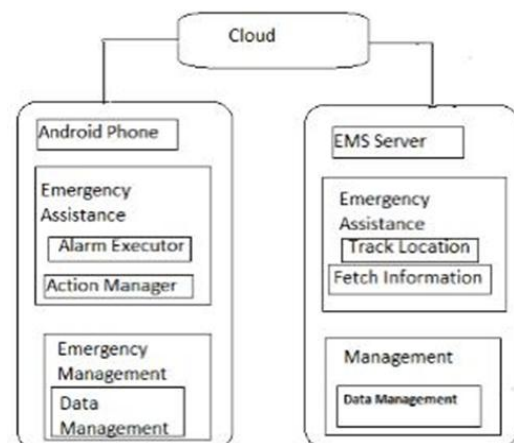
A. Client Side :

1. Graphics User Interface of Electronic Health Record for filling personal and medical information on cloud.
2. Graphics User Interface for editing the information and updating it on server.
3. Emergency will be selected that is accident, heart attack ,burn case and so on and send it to server.
4. Also contains some user useful services like Tracking Blood Bank and Clinic Module
5. No other person not even admin other then user should have the rights to edit his information. Every user had his own unique_id for accessing EHR application which will generate after the registration by user.

a) Availability :

The system is available on demand. Only thing user has to do is to install the application on his android phone and register to the EHR server by giving all required information.

b)Supportability :

The system is able to support Android 2.3.3 and Onwards

B. Server Side :

1. The client accepting request, server gets activated and searches out nearest hospital.
2. It tracks out location of patient.
3. It fetches the coordinates and type of emergency from client.
4. Search Nearest hospital depending upon variables.
5. Add the all hospital information into database which is present on cloud and update it regularly.
6. Generate EHR of patient by pressing the emergency button of phone in case of emergency and send it to selected hospital for pre-medical treatments.

It allows emergency medical team to notify the hospital about the incoming victim's personal information and medical condition.

II. EXISTING SYSTEM

In this existing system, It observed that people in unknown area are in severe danger if they don't able to find hospital quickly. In emergency case a single minute counts so it is very important to develop an automated system.

III. PROPOSED SYSTEM

3.1 Research Methodology

Huge database will be maintained of all the hospitals, Clinic and Blood bank over the server. So proper data mining will be beneficial to track out the optimal hospital in emergency case .The User or Patient will first register to the application and his data will be saved over the cloud.Proposed system of Domain Specific Tracking For Optimal hospital On Cloud In EMS Using Android OS is using A* algorithm for find the nearest route. A* uses heuristic approach to find nearest node within different cluster. The alarm action will send emergency messages and calls to the users nearby hospital, the emergency message will include the location information, in order for the rescue stuff to locate the user and health record of the patient. User authentication is done according to the role based access control. A new user has to register him-self for accessing the content of our system .Registered user logins with the registered username and password. Using the information over the server EHR of the patient will be automatically generated and forwarded to the selected hospital for pre-medical treatment. We will maintain data of clinic and blood bank over the server. This will be used as a extra service to find clinic in city for particular specialty (e.g. Gynecologist, Eye Specialist, Dentist) and also find blood banUser will fill his or her personal and medical details while registration which will be user to generate Electronic Health Record (EHR). The OHT (Optimal Hospital Tracking) system tracout the optimal hospital for the patient using the variables.

Then client accepting request, server gets activated and searches out nearest hospital. It tracks out location of patient.

3.2 System Architecture

Client Side and Server Side

Clint Side

1.Graphics User Interface of Electronic Health Record for filling personal and medical information on cloud.

Graphics User Interface for editing the information and updating it on server. Emergency will be selected i.e. accident, heart attack, burn case etc. and send it to server. Also

contains some user useful services like Tracking Blood Bank and Clinic Module tracks out location of patient.

It fetches the coordinates and type of emergency from client. Search Nearest hospital depending upon variables.

Sever Side:

Then client accepting request, server gets activated and searches out nearest hospital. It tracks out location of patient.

It fetches the coordinates and type of emergency from client. Search Nearest hospital depending upon variables.

IV. TRAFFIC CONTROL SYSTEM

There will be a two main modules which includes several sub modules. These modules are as follows.

Ambulance Application:

- Login
- Get current location using GPS
- Send alerts to next 3 signals(Traffic police app)
- Get path to hospital
- Get Estimated time and speed.
- Send location info to hospital and Police Web server.

Traffic Police Application:

- Get alerts
- Verify ambulance.
- Get Location info of ambulance.
- Clear traffic.
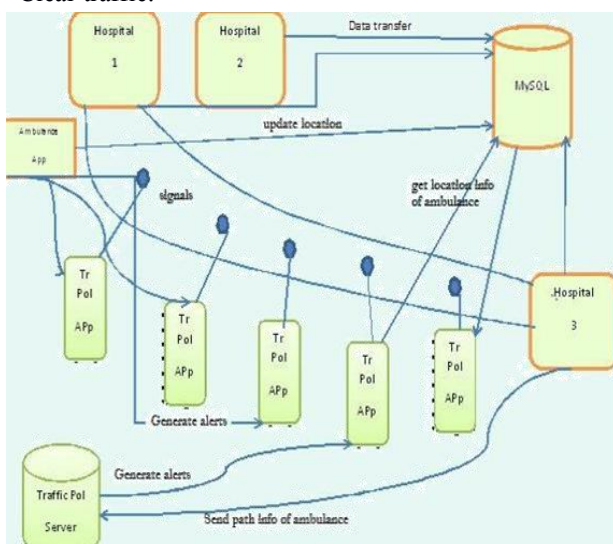
When specific hospital book for patient, then our ambulance app send the details of path to Traffic police server and into ambulance app. When ambulance app start it send the alert for next three traffic signal means to the traffic police app so that he can clear the road, if ambulance reaches at 2nd signal the ambulance app send alert for next 3 signals this cycle continues until hospital reaches at destination hospital, so that in this way traffic can be controlled and ambulance reach at hospital in specified time.

V. CONCLUSION

Electronic Health Record is a key factor playing an important role towards the successful adoption of mobile healthcare systems. EHR serves the chronic patients with more convenience and safety by providing medical details of patient for premedical treatments. EHR can be also used by people to keep and maintain their health record on cloud for convenience and safety and future work is Implement Nearest Distance Tracking Algorithm, Tracking Different Parameter taking "Medical Emergency" into mind.

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