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Automated Accident Rescue System

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ABSTRACT:
Nowadays the uses of vehicles increases due to increases of vehicles the number of accident rate also increases. This system uses to avoid the loss of human life by accident. This scheme is fully automated, by using vibration sensor thus it finds the accident spot, helping to reach the hospital in time. Main controllers are server used to stored database about hospital unit, ambulance unit and the enquiry unit. Vibration sensors sense the current location of the accident and inform to the hospital. Hospital search which ambulance is available and send it to the accident place. Enquiry unit also visit to the accident place by read the message.

***Keywords*:**

Traffic; Sensor system; Ambulance; GPS; GSM; Controller

Traffic- this unit can be work when we want to reach in hospital immediately and their required some problem of road traffic then without follow any signal rule we can reach in hospital at right time and save the life of patient.

Sensor system- this unit senses the location of accident place and send message to the main controller.

Ambulance- this unit is related to the Hospital unit. when accident message send to the main controller then it show the availability of Ambulance and send to the accident place.

GPS- it is a Global Positioning System used to find out the position of accident place.

Controller- it is a main server called database where all database are stored.

INTRODUCTION

Nowadays Wireless Sensor Networks (WSN) can be used in various domains like military, home automation, health care monitoring, security and safety etc. This system detects location of the vehicle accident with the help of vibration sensor. Sensor senses the location of the vehicle accident using GPS module and then transforms the message to the main controller called server. This system used when a person need medical treatment not for the accident case but for other reason like having heart attack problem at that time a message is transmitted to the medical help centre by just pressing the switch of the vehicle. Such a system is beneficial to provide very fast medical treatment to the victim of vehicle accident a single switch. Using this system we can also sends a message to police control room with the

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location of accident to minimize the time required for legal police process, and a victim can get fast treatment.

PROBLEM DEFINITION

Nowadays, as the population increases the use of vehicle is also increased and hence increases in number of accident.due to increase the accident there is loss of life due to the delay in the arrival of ambulance to the accident spot.our system work great use to the ambulance if the traffic signals in the path of the hospital are ON. The controller unit send one message to the hospital and one to the enquiry unit hence the treatment of patient can start at a particular time period.

OBJECTIVE

The main objective is to be minimizing the time gap between the occurrence of accident and the time required for medical help centre and the police station to reach at the location of accident to give treatment to the victim and complete all procedural enquiries about accident. When accident occurred many time wasted for search the location of accident place, such a time our system work faster and avoid the loss of life due to time delay.

Base Model

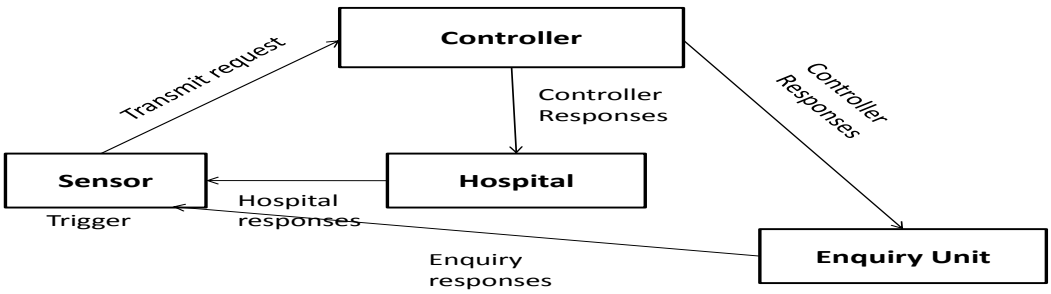

Fig1.1: base model for automated accident rescue system

Our project based on four main modules:
1. Sensor
2. Controller
3. Hospital
4. Enquiry

Sensor is a trigger that senses the location of the accident place and transmit request to the main controller called server. Controller is a database where stored the information about hospital and police station. The controller response to the hospital and enquiry unit and when message is received to the hospital and enquiry unit then it response to the sensor for trace the location.

PROPOSED SYSTEM

To overcome the problem of existing system we will implement new system in which there is automatic detection of accident .A sensor, GPS, GSM unit fitted in the vehicle detects the accident. It sends the accident location to the main server unit

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which houses the database of all the nearby hospitals. The ambulance would be able to cross all the traffic junctions without waiting. The ambulance is guided to the hospital by the server through the shortest route. The vehicle unit installed in the vehicle senses the accident and sends the location of the accident to the main server. Wireless technologies used for information transferring.

Server modules:

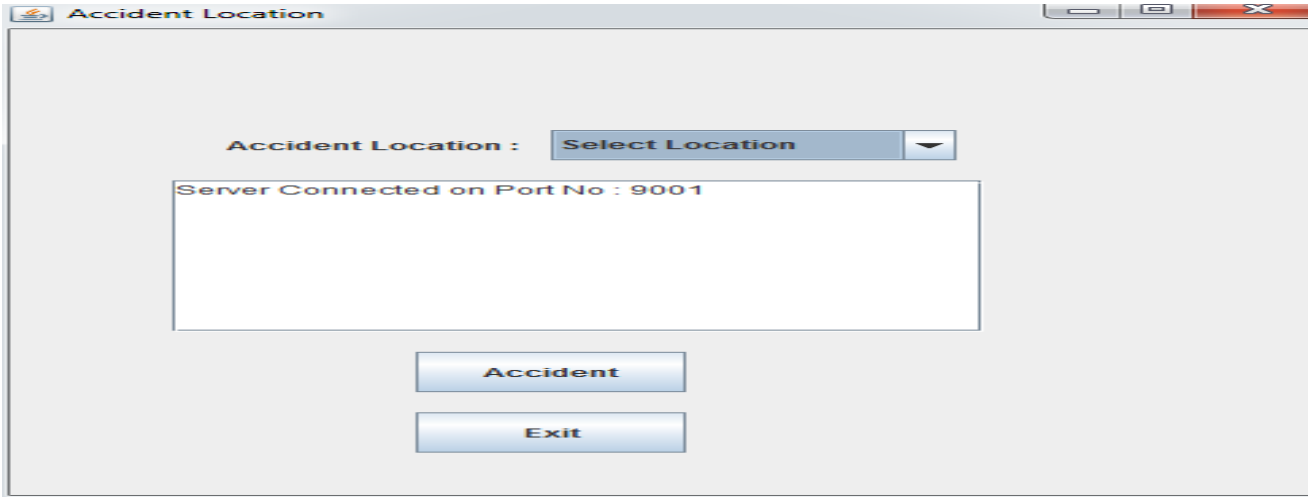

Fig 1.2: server connection for tracing accident location

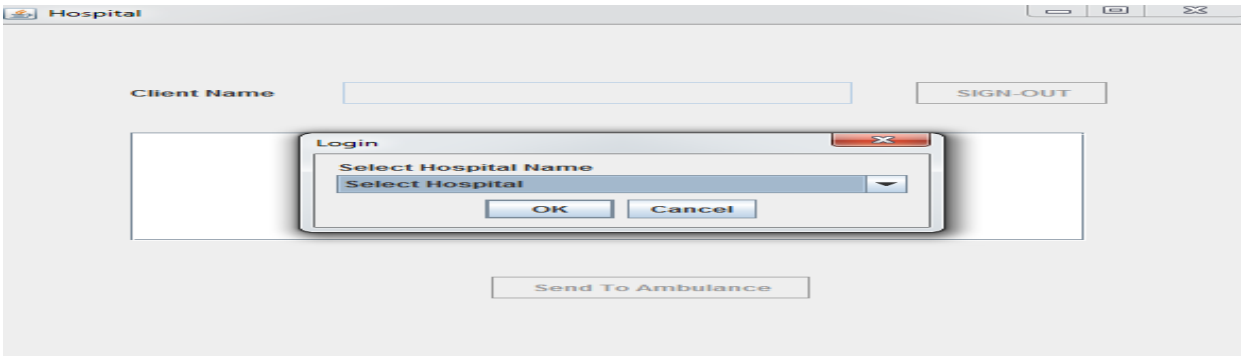

Fig 1.3: searching hospital after tracing location

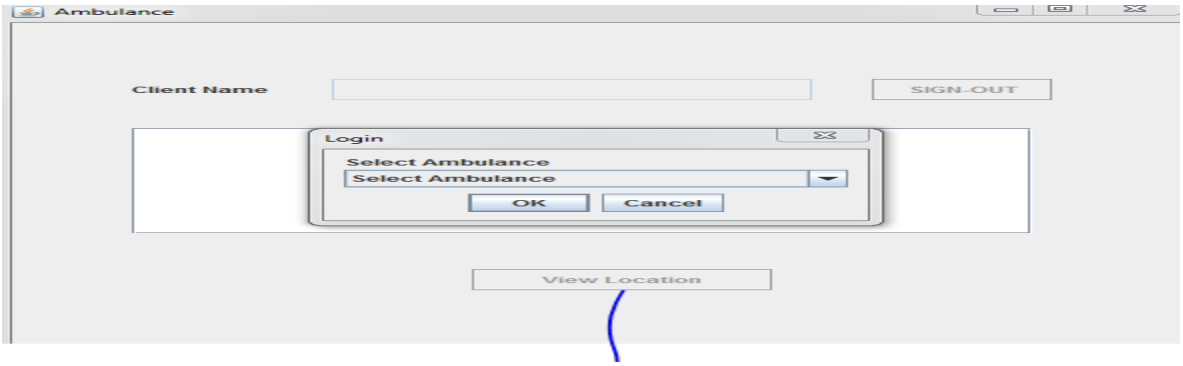

Fig 1.3: hospital search for available ambulance

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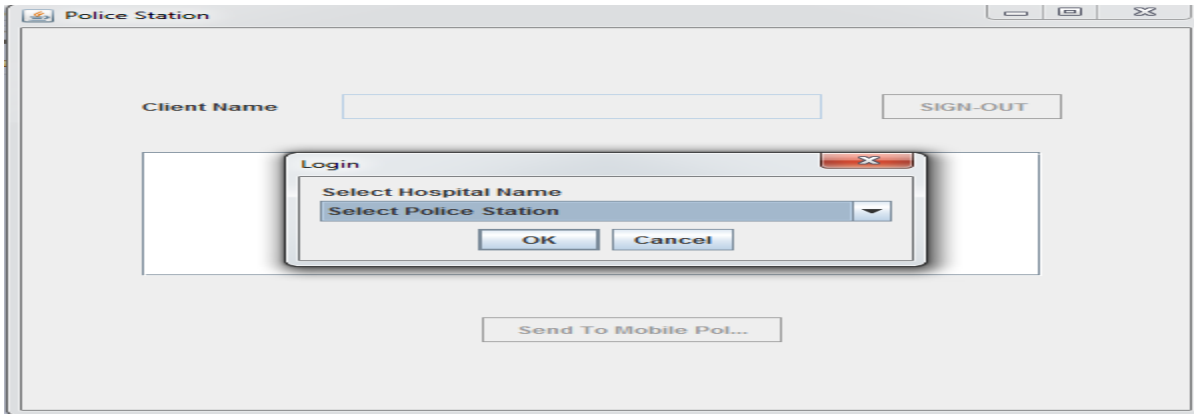

Fig 1.3: searching police station after tracing location

CONCLUSION

This system can show the location of accident spot accurately , and realizing the automation of accident detection and information transmission. Consequently, it will save the rescuers form wasting their time in searching of location. The experiments of model car's collision proved that this system can automatically detect corresponding accident and sent related information to the main controller. Such functions can be useful for "help" and "safety", respectively.

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