Review Paper On: Accident Detection Using VANET

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***Abstract*: -** Vehicular ad hoc networks (VANETs) are collecting enlarge recognition from techno based and deployment based sections of industry, due to the various applications and probable immense welfare they offer for future VANET users. Safety information exchange enables life-critical application, such as the alerting functionality during crossing traversing and lane merging, and thus, plays a key role in VANET application. In a VANET, vehicles will depend on the integrity of received data for deciding when to send lerting triggers to drivers. The interaction between car to car, car to roadside unit is done using wireless communication interfaces. That is why sefty is an salient concern area for vehicular grid application. For authentication purpose so many bandwidths is consumed and the production becomes low. In VANET some serious networks attacks such as man in middle attack, impersonation is possible. In this paper we are going to through some light on the previous researches done in this area and will compare the various drawbacks of these researches. After that we are giving different issues on VANET and finally conclude with proposed algorithms**.**

Keyword: - *Security, Road Side Unit (RSU), Base station unit (BSU), Bandwidth*

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I. INTRODUCTION

In Today's World Due to Chaotic and Fast Lifestyle, it becomes very difficult to know the Occurrence of Accident and to locate its position This Causes Danger to Victim's Life and in Most Cases leads to Loss of Life . The proposed application combines vehicle and smart phone - to achieve a symbiosis between both that is able to improve the effectiveness of extremity services by making accident detection fully automatic. Accident detection is based on the parameters provided by the Micro controller interface with the information gathered by the mobile only, such as GPS information.

. In our result, smart phones are used as an alternative On-Board-Unit (OBU) installed in the vehicle, obtaining the information in the vehicle's internal bus wirelessly. Theonly necessity to attain this goal is that the vehicle supports the GPS standard. supportive accident detection is followed by any sequence of actions explicated by the user, example sending accident details via SMS or e-mail, or making an automated phone call to the emergency services. We also decide the total time required to detect an accident, prepare the warning message to be carry, and the actual delivery of such message through different communication channels.

II. LITRATURE SURVEY

In these days the social networking is very important for the people, friends, family and other relatives really communicate with each other and want to know about them like chatting, sharing photo's, location and etc. But finding location by various devices is a simple and very small service for people of all ages in all countries. Devices like GPS is needed since it is as simple carrying device as moving from one place to another by using one's device to find the location and direction only.

There are number of projects that are transfer in the LBS field. it is due to the reality that this type of application was somehow exclusive for mobile service providers because they use mobile cells information to get the location of the mobile and then provide a service to get it. And there are few problems that have identified with the current LBS mobile application are:

- They can only allow the user to view their own location.
- They can only let the user know other people's location through message/ words.
- They can only show the location of the other people if they have the permission of that people.

This might be a problem when the other person can't respond due to accident or when the other person doesn't want to be create (like running away from home) and needed to be found. So by solving the problems with the help of Modern technology, it is an innovative to come out with the Widget Based Position System (WBPS). It's a mobile widget application that is builds to provide the mobile phone users to find the location of friends and family by using Global Position Service (GPS) very specifically. The main objective of this work is to design and implement a creative and interactive API that helps users to locate the position of their family members and receive alerts when friends are nearby.

III. EXISTING SYSTEM

A . Stationing

The stationing is the most common method for road location identification. The location is identified by the distance from the zero point of each distinct road. The distances are marked by special road signs, usually each 1km, but also small distances like 500m or even 100m are used, depending on the road category and local standards. It mostly happens that the local importance roads and urban roads are lacking this marking what causes subsequently serious difficulties in the identifications of accidents location. But also the distances between stationing signs higher than 200m could lead to certain non-accuracy in the identification of the accident spot. But the significant disadvantage of this system that limits its accuracy is its complicated adaptation to the changes in the length of the road caused by its reconstruction that changes its length Therefore a flexible update system reflecting actual changes has to be introduced between road administration and traffic police.

B. Node system

The node system is defined as the network of nodes and sections among them. The nodes are usually placed at the junctions and to each of them is allocated the number.A manageable grid can be displayed as a web with nodes at junctions. different objects on the road, like bridges, channels, borders, etc., may be also considered as the nodes what can facilitate the localization in the case of long distances between adjacent nodes. The sections are simple linear elements with the exact distance. Each node is connected with at least one more node. The accident location is marked by the distances from the neighboring nodes. The node system contains usually node numbers, administration unit numbers,political authority numbers, node characteristics, crossing roads numbers and adjacent nodes number. other information can also be included, e. g. traffic volumes. The big advantage of the node system is its simplicity of changes in the case of infrastructure changes.

C. GPS

GPS (Global Positioning System) is rapid, accurate and low priced system of recognition of accident locations. This method manipulate the localization in the geographic coordinates. Its advantages being recognized as GIS (Geographic Information System) are getting widely used. The method is suitable for safety analysis issues - road accident locations and spots with high accident concentration can be simply revealed. various background maps can be conveniently used. The localization has to be performed at the accident spot right after the accident occurrence. It enables the most precise examination of the accident causes and its circumstances. For this purposes mobile GPS devices having sufficient accuracy to obtain the location data and to transfer them to a PC can be used.

IV. ALGORITHM

Our application will be usable for the Android platform, mostly including different wireless interfaces, such as Bluetooth, Wi-fi, GPS and 3G, making them ideal for our purposes.particularly, our resolution will depend on the GPS technology and microcontroller system to know accident event and the location of the accident. Since a data communications channel between the smartphone and an online server is required, it can be established using either the Wi-fi or the 3G interface.. For instance, the system can be configured to send an SMS to our family, initiate a voice channel with the emergency services, and send detailed accident information, including impact speed and current GPS position, to a special purpose server deceleration of the spring detected is greater than length we consider that an accident occurred. the accident warning procedure acts by retrieving GPS and accident details, which are automatically sent through SMS to a pre-specified address. Afterward, an automatic emergency call to the emergency services is made.

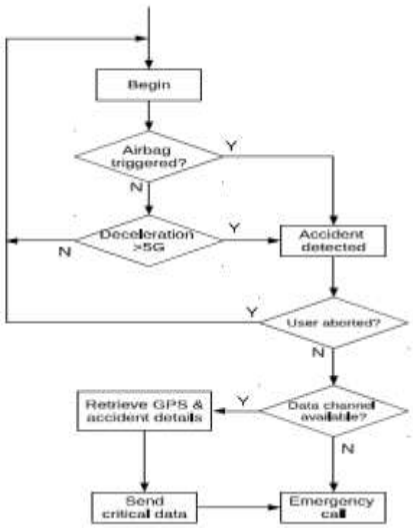

Fig.1: Flowchart for Accident Detection

- **Nearest Search**

The method of estimating location for the case of no fallacy has been jotted down. One of the most prominent error sources is the GPS receiver's clock. Because of the highly substantial value of the speed of light, c, the calculated distances from the GPS receiver to the satellites, the pseudoranges , are highly sensitive to errors in the GPS receiver clock. This suggests that accurate and expensive clock is required for the GPS receiver to work. Surfaces intersect in the GPS problem. It is pinpointed that the surface value of the three spheres intersect, thus the intersection circle of the first two spheres is very large, and so the third sphere surface mostly intersects this large circle. It is rarely possible that the surface of the sphere corresponding to the fourth satellite will intersect either of the two points of intersection of the first three, as any clock mistake could cause it to miss intersecting a point. nevertheless, the distance from the accurate estimate of GPS receiver position to the surface of the sphere corresponding to the fourth satellite can be used to compute a clock correction.

V. CONCLUSION

In this project we are modifying existing vehicles with smartphones using wireless interfaces to invent a resolution which would control the vehicle and prompt automated warning procedures in case of accident detection.The technology would be advantageous through the prospective of accelerated provision of medical services to injured people on the road due to an instant emergency call, instantaneous display of map showing the location of the vehicle.As a part of upcoming work we propose to further validate our application in real crash tests, and to elaborate an enhanced emergency services server that is able to merge the data automatically delivered by the vehicle with information manually introduced by the operator, thereby achieving a detailed accident characterization and management service.

VI. ACNOWLEDGEMENT

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