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"MEDICAL ASSISTANCE SYSTEM FOR ACCIDENTS"

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Abstract — Long latency needed for emergency responders to arrive may be a primary reason behind magnified fatalities in serious accidents. A technique to scale back this latency is to scale back the number of your time it takes to report AN accident. Smartphone's are present and with network property are excellent devices to right away inform relevant authorities regarding the prevalence of an accident. We have a tendency to are coming up with AN mechanical man application which can be helpful for peoples to assist different peoples WHO are laid low with incident like accident. it'll facilitate U.S.A. to save lots of the accidental person. Project is style for AN accident detection system. The accident detection system informs the police room regarding the accident by clicking icon of accident. the appliance recommend close hospitals and police stations list in application. FIR is generate by police office and send copy to the revered hospital system. revered hospital scan user QR Code and supply treatment per info. Conjointly send emergency SMS to users preregister mobile variety.

Keywords- GPS, mobile interaction, QR-Codes.

I. INTRODUCTION

A QR code may be a kind of barcode that may hold a lot of info than the acquainted kind scanned at checkouts round the country. The "QR" stands for "quick response," a relevance the speed at that the big amounts of knowledge they contain is decoded by scanners. They were unreal in 1994 in Japan and an initio used for chase shipping. Because the code is simply decoded by the camera of sensible phone, this technology is progressively accessible to the typical person. Rather than chase automotive elements and packages, the codes is accustomed store info of user. A QR code acts as a link embedded within the globe, desegregation it with the virtual pc world. the event of a transportation has been the generative power for people in general to possess the best civilization on top of creatures within the earth. Automobile features a nice importance in our existence. we have a tendency to utilize it to travel to our work place, detain bit with our friends and family, and deliver our product. however it will also bring disaster to U.S.A. and even can kill U.S.A. through accidents. AN accident may be a deviation from expected behavior of event that adversely affects the property, living body or persons and also the atmosphere. move is primary concern for everybody. Recent advances in automaton square measure one amongst the foremost widespread sensible phone platforms at the instant, and also the quality is even rising. in addition, it's one amongst the foremost open and versatile platforms providing software package developers quick access to phone hardware and wealthy software package API. Smartphone technologies square measure creating it potential to reduce the death rate that square measure happening by vehicle accidents in an exceedingly a lot of transportable and price effective manner than standard in-vehicle solutions.

II. LITERATURE SURVEY

According to literature survey after studying various IEEE paper, collected some related papers and documents some of the point describe here:

With fatalities on the road across the EU of more than 40.000 people every year, the European Commission recognizes that the current measures towards reducing the fatality number is not enough. In the White Paper on European transport police from 2001, the European Commission proposed that the European Union should set itself the target of halving the number of road fatalities by 2010. One of the initiatives from the European Commission is the establishment of the eSafety Forum, which is a joint industry/public initiative for improving road safety by using new Information and Communications Technologies. The overall objective is to join forces and to build up a European strategy to accelerate the research and development, deployment and use of Intelligent Integrated Safety Systems including Advanced Driver Assistance Systems (ADAS) for increasing road safety in Europe.[1]

Android is one of the most popular smartphone platforms at the moment, and the popularity is even rising. Additionally, it is one of the most open and flexible platforms providing software developers easy access to phone hardware and rich software API. We envision Android-based smartphones as a powerful and widely used participatory sensing platform in near future. In this paper we examine Android smartphones in the context of road surface quality monitoring. We evaluated a set of pothole detection algorithms on Android phones with a sensing application while driving a car in urban environment. The results provide first insight into hardware differences between various

smartphone models and suggestions for further investigation and optimization of the algorithm, sensor choices and signal processing.[2]

By combining smartphones with existing vehicles through an appropriate interface we are able to move closer to the smart vehicle paradigm, offering the user new functionalities and services when driving. In this paper we propose an Android based application that monitors the vehicle through an On Board Diagnostics (OBD-II) interface, being able to detect accidents. Our proposed application estimates the G force experienced by the passengers in case of a frontal collision, which is used together with airbag triggers to detect accidents. The application reacts to positive detection by sending details about the accident through either e-mail or SMS to pre-defined destinations, immediately followed by an automatic phone call to the emergency services. Experimental results using a real vehicle show that the application is able to react to accident events in less than 3 seconds, a very low time, validating the feasibility of smartphone based solutions for improving safety on the road.[3]

Wireless vehicular networks for cooperative Intelligent Transport Systems (ITS) have raised widespread interest in the last few years, due to their potential applications and services. Cooperative applications with data sensing, acquisition, processing and communication provide an unprecedented potential to improve vehicle and road safety, passenger's comfort and efficiency of traffic management and road monitoring. Safety, efficiency and comfort IT applications exhibit tight latency and throughput requirements, for example safety critical services require guaranteed maximum latencies lower than 100ms while most infotainment applications require QoS support and data rates higher than 1 Mbit/s. The mobile units of a vehicular network are the equivalent to nodes in a traditional wireless network, and can act as the source, destination or router of information. Communication between mobile nodes can be point-to-point, point-to-multipoint or broadcast, depending on the requirements of each application. Besides the ad hoc implementation of a network consisting of neighboring vehicles joining up and establishing Vehicle-to-Vehicle (V2V) communication, there is also the possibility of a more traditional wireless network setup, with base stations along the roads in Vehicle-to-Infrastructure (V2I) communication that work as access points and manage the flow of information, as well as portals to external WANs.[4]

In this paper, 8, 16 and 32 bit maximum length LFSR which can give the maximum states of PN sequence has been implemented. Also presented the comparison of performance analysis of 4 bit LFSR and 16 bit BBS based on synthesis and simulation result on FPGA using hardware descriptive language(HDL) with maximum length feedback polynomial to understand the area, speed and power requirement. The target device we have used is Xilinx Virtex6 XA9572XL FPGA and performed simulation and synthesis using Xilinx ISE 12.1. FPGA is a predesigned reconfigurable. It has the ability to reconfigure its circuitry for a desired application or function at any time after manufacturing. It is an adaptive hardware that continuously changes in response to the input data or processing environment. The FPGA configuration is generally defamed using a hardware description language (HDL), similar to circuit (ASIC).FPGAs can be used to implement any logical function that an ASIC can perform. Because of various advantages and rapid prototype development can possible, so FPGA is chosen.[5]

This paper shows how smartphones in a wireless mobile sensor network can capture the streams of data provided by their accelerometers, compasses, and GPS sensors to provide a portable "black box" that detects traffic accidents and records data related to accident events, such as the G-forces (accelerations) experienced by the driver. We also present an architecture for detecting car accidents based on WreckWatch, which is a mobile client/server application we developed to automatically detect car accidents. Figure 2 shows how sensors built into a smartphone detect a major acceleration event indicative of an accident and utilize the built-in 3G data connection to transmit that information to a central server. That server then processes the information and notifies the authorities as well as any emergency contacts.[6]

An accident is a deviation from expected behavior of event that adversely affects the property, living body or persons and the environment. Security in vehicle to vehicle communication or travelling is primary concern for everyone. The work presented in this article documents the designing of an accident detection system. The accident detection system design informs the police control room or any other emergency calling system about the accident. An accelerometer sensor has been used to detect abrupt change in g-forces in the vehicle due to accident. When the range of g- forces comes under the accident severity, then the microcontroller activates the GSM modem to send a pre-stored SMS to a predefined phone number. Also a buzzer is switched on. The product design was tested in various conditions. The test result confirms the stability and reliability of the system.[7]

Tele-operated systems have been used in diverse biomedical applications, from the rehabilitation of patients, the management of biological hazardous material and medication storage, to minimally invasive surgery. This paper, introduces an Android OS (operating system) based application that communicates with an industrial robot Kuka KR-6 through USB to Serial connection, to control it with the on-board accelerometers, and gyroscopes of a tablet or smartphone, intended to be used in telemedicine procedures. Arduino Uno microcontroller board, RS232 Shifter SMD

and mobile device were used to develop this work. To evaluate this system a survey was done with engineering related users.[8]

This paper presents HDy Copilot, an Android application for accident detection integrated with multimodal alert dissemination, both via eCall and IEEE 802.11p. The proposed accident detection algorithm receives inputs from the vehicle, via ODB-II, and from the smartphone sensors, namely the accelerometer, the magnetometer and the gyroscope. The Android smartphone is also used as human machine interface, so that the driver can configure the application, receive road hazard warnings issued by other vehicles in the vicinity and cancel countdown procedures upon false accident detection. A prototype implementation was validated via laboratory tests. This paper presents HDY Copilot, an Android application for accident detection integrated with multimodal alert dissemination, both via eCall and IEEE 802.11p. The proposed accident detection algorithm receives inputs from the vehicle, via ODB-II, and from the smartphone sensors, namely the accelerometer, the magnetometer and the gyroscope. The Android smartphone is also used as human machine interface, so that the driver can configure the application, receive road hazard warnings issued by other vehicles in the vicinity and cancel countdown procedures upon false accident detection. A prototype implementation was validated via laboratory tests.[9]

IV. CONCLUSION

Results have shown that the applying developed is ready to properly fulfill its purpose inside a brief fundamental measure. Our results show that the entire time needed to perform all the tasks, as well as the delivery of AN SMS with the accident details, followed by providing the close police headquarters and hospital details and causing them an alert message of the user accident with actual location of user, is taking short fundamental measure.

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