

Real Time Implementation of Alert in And Tracking System For Chain Snatching

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Abstract- The idea of our concept is based on the news related to chain snatching which we very often read in the newspapers, the word that is rampant in newspaper, television channel and in all our lives is Chain Snatching. This is one of the crimes which are increasing as the river flows downstream. Back -to- back chain snatching in the city put the cops on their toes. Even as chain snatchers are doing crime with the catch-me-if-you-can spirit, police are working overtime to dent that spirit, but to no avail. Observing that the robberies have increased over the years, there is also a raise in chain snatching incidents. Thus chain snatching has become an urban phenomenon. The aim of this approach is to develop a smart electronic gadget that is able to track the culprit and alert the police through the Real time transmission of video signals of the scene of crime which helps in solving the complicated cases. It also reduces many kinds of crimes taking place in society and hence provides security for public. This innovation also pulls down the anti-social activities in public places.

Keywords- GPS, GSM, Vehicle Tracking, Microcontroller.

I. INTRODUCTION

The serious threat that the public is facing is “Chain snatching” and has become a challenge for the Police Department in capturing the culprits. There is no other Nobel way to thank our country by giving helping hands to the society. So the idea of “Real time implementation of alerting and tracking system for chain snatching”. The latest technology has made it possible in bringing out our innovative idea into true by incorporating the various factors required. The project design has two parts; the hardware part which is been installed at the street lights or poles and the software part is the android application which will be with the victim.

When the scene of crime occurs, the device gets activated. The victim needs to speak some specific words like “KALLA”, “THIEF”, “HELP”, “CHORE”, with which our device is being coded. Once the word mapping is done successfully, the speech processor

II. OBJECTIVE

The main objective of this approach is to help the police department in capturing the culprit and clarify (reducing) the cases which are at the state of investigation. A helping hand to police department in solving multiple cases and to reduce the count of chain snatching cases.

The aim of this project is to develop a smart electronic gadget that is able to track the culprit and alert the police through the real time transmission of video signals of the scene of crime which helps in solving the complications and providing real time safety.



Figure 1: Protect Chain Snatching [11]

Figure.1 represents the image for protecting chain snatching. Thus, by providing mode of communication between the hardware and software, the triggered modules are wireless which makes our system more efficient.

III. PROBLEM STATEMENT

Chain snatching is one of the crimes which are increasing as the river flow downstream. Back-to-back chain snatching in the city put the cops in their toes. Many cases are being lodged in the police station, very few cases have been solved and many of the cases are still under investigation .Figure 2 picture of chain snatching. Chain snatching has become a serious threat to the public and it becomes challenge for the police department.



Figure 2: Protect Chain Snatching [11]

IV. LITERATURE SURVEY

1 Title: “A Real Time Hi-Speed Tracker for Chain Snatcher”

Author: B S Manusudhan and S Sowmyasudhan.

The aim of this project is to develop a low power smart electronic gadget that is capable of tracking the chain snatcher and alert the police through the Real time transmission of video signals of the scene of crime which helps in solving the complicated cases. It also reduces many kinds of crimes taking place in and around the city and hence provides security for the public. The project design has two parts; a Public end device (Smart electronic gadget/Transmitter) mounted on the KEB pole and the Police end device (receiver) located at the police control room. With the above discussed issue and to meet the challenge we produce a novel idea for tracking the Chain Snatcher on Real time. This paper gives the demonstration on the same.

Harvesting power from Human Body for Powering Soc.

2. Working of Customized GPS-SoC.

Title: “Youth Offenders: Gold Chain Snatchers”

Authors: Dr Mamat patel

This paper tells about how Youth offenders are finding chain snatching lucrative than ever before because of quick returns. Now even the time of the day does not matter to offenders, when it comes to chain snatching. A single stolen gold chain could fetch anywhere between Rs. 5,000 to 50,000. Chain snatchers have fixed ‘agents’ in the market who buy the stolen gold from them for a good sum. This paper addresses the different techniques and reasons for chain snatching. The

study involved 325 cases of chain snatching which were reported in print media in five years.

3 Title: “Design of System on Chip GPS or Chain Snatch Tracker”

Authors: Sowmya S, Dr. G. Raghavendra Rao

This paper presents, SoC GPS CHIP powered by human body, to track continuously when the chain is snatched. Highly-compact modules combine the RF and antenna can be combined with energy-harvesting transducers and power management to provide the same kind of small system that is independent of power sources. Therefore powerful, low weight and compact energy storage devices and energy harvesting from the human body are crucial technologies for extended and reliable operation. Inference: Therefore powerful, low weight and compact energy storage devices and energy harvesting from the human body are crucial technologies for extended and reliable operation.

4 Title: “Snatch Theft Detection in Unconstrained Surveillance Videos Using Action Attribute Modeling”

Author: Debaditya Roy, C. Krishna Mohana

This paper tells about manually identifying crimes like chain and purse snatching is a tedious and challenging task. Snatch thefts are complex actions containing attributes like walking, running etc. which are affected by actor and view variations. To capture the variation in these attributes in diverse scenarios, we propose to model snatch thefts using a Gaussian mixture model (GMM) with a large number of mixtures known as universal attribute model (UAM). However, the number of snatch thefts typically recorded in a surveillance videos is not sufficient enough to train the parameters of the UAM. Hence, we use the snatch theft clip is obtained using maximum a posteriori (MAP) adaptation of the universal attribute model. However, super-vectors are high-dimensional and contain many redundant attributes which do not contribute to snatch thefts large human action datasets like UCF101 and HMDB51 to train the UAM as many of the actions in these datasets share attributes with snatch thefts. Then, a super-vector representation for each.

V. METHODOLOGY DESCRIPTION

Initially whole block diagram and logical connections of the project is analysed. Required hardware and software are

collected. Each hardware is tested manually and conditions that need to be met during interfacing are noted down.

Every hardware is interfaced with controller and tested Overall logic of the project built and tested Project is tested for good number of times to meet its needed accuracy.

LCD’s technologies allow display to be much thinner when compared to cathode ray tube technologies. LCD is composed of several layers which include two polarized panel filters and electrodes.

LCD works on the principle of blocking light rather than emitting light. A liquid crystal display consists of an array of tiny segments (called pixels) that can be manipulated to present information.

Liquid crystal do not emit light directly instead they use light modulating techniques. The 16x2 LCD display with model 1602A is used. Port 0 and port7 are used for LCD display.

Renesas is a 16 bit microcontroller. Minimum instruction time can be changed from ultra-low speed (30.5us) to high speed (0.03125us).16 to 512KB of ROM and 2 to 32KB of RAM are available depending upon the series and number of pins.On-chip high-speed (32 MHz to 1 MHz) as well a low-speed (15 KHz) oscillator is present.10 bit resolution A/D converter (6 to 26 channels depending upon the series) Totally 3 UART for Serial Interface. Totally 0-7 channels for timer with built in PWM features. Most of the pins of Renesas have multi-task features. Cost of Renesas microcontroller is comparatively less. Rigid body of microcontroller hence less prone to damages due to electrostatic charge. Operates with 5v power supply. GSM is an open and digital cellular technology used for transmitting mobile voice and data services.

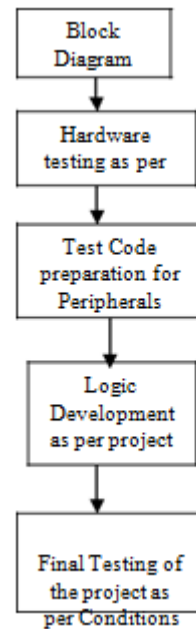


Figure 3: Flowchart of the system

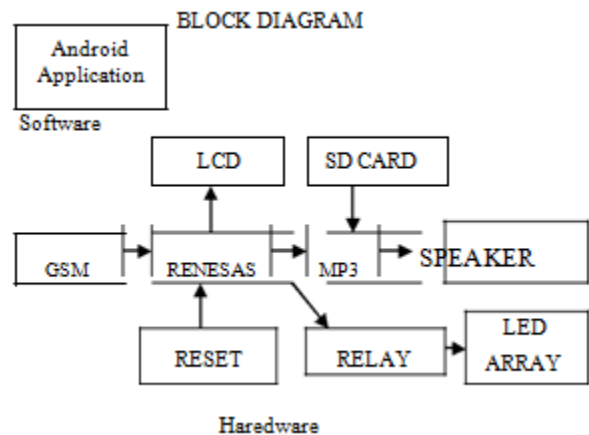


Figure 4:Block digram of chain snatching

A liquid crystal display (LCD) is a flat panel display ,electronic visual display, based on Liquid Crystal Technology.

SIM900 is a Tri-band GSM/GPRS engine that works on frequencies EGSM 900 MHz, DCS 1800 MHz and PCS 1900 MHz. SIM900 features GPRS multi-slot class 10/ class 8 (optional) and supports the GPRS coding schemes CS-1, CS-2, CS-3 and CS-4.

We can use AT Command to get information in SIM card. The SIM interface supports the functionality of the GSM Phase 1 specification and also supports the functionality of the new GSM Phase 2+ specification for FAST 64 kbps SIM (intended for use with a SIM application Tool-kit).

MP3 is an audio coding format for digital audio. FN-M16P module is a serial MP3 module that is with a perfect integrated MP3 and WMV decoder chip. It provides micro SD card driver, and supports FAT16 and FAT32 file systems. A relay is an electrically operated switch. Current flowing through the coil of the relay creates a magnetic field which attracts a lever and changes the switch contacts. The coil current can be on or off so relays have two switch positions and most have double throw (changeover) switch contacts as shown in the diagram. Relay works on the principle of an electromagnetic attraction. when the circuit of the relay senses the fault current, it energizes the electromagnetic field which produces the temporary magnetic field. The coil of a relay passes a relatively large current, typically 30mA for a 12V relay, but it can be as much as 100mA for relays designed to operate from lower voltage.

VI. FLOW CHART

SOFTWARE FLOWCHART DESCRIPTION

- Step 1: Click on the android application. Text Speak page will appear.
 Step 2: Enter on the text speak to give the voice input.
 Step 3: Give the coded input voice messages like (Chore, Kalla, Thief, Help).
 Step 4: Check if texts speak is recognized or not.
 Step 5: If recognized, the message will displayed on the road side unit and shows SMS sent Successfully. Step 6: Image is captured and sent to the registered E-mail ID (police control room)
 Step 7: Video is recorded and stored in gallery mean while the speaker and LED's works at a same time on the road side unit.

SOFTWARE FLOWCHART

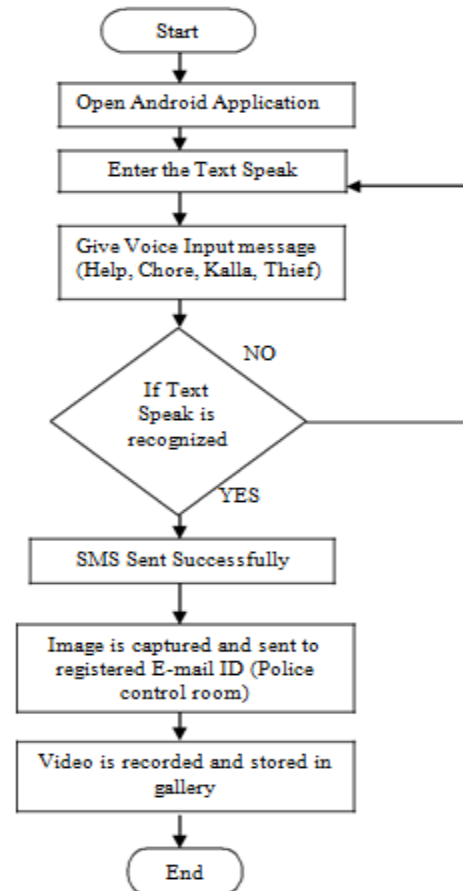


Figure 5: Flowchart of software part

HARDWARE FLOWCHART DESCRIPTION

- Step 1: Check the public unit for initial conditions.
 Step 2: Waits for the GSM Activation to get a Network.
 Step 3: It waits for coded input messages from android application.
 Step 4: If the coded input message is detected, it displays the message on LCD Screen which is on the road side unit.
 Step 5: If the message is not received, repeat step 3.
 Step 6: Once the message is received the speaker and LED's activates at the same time.

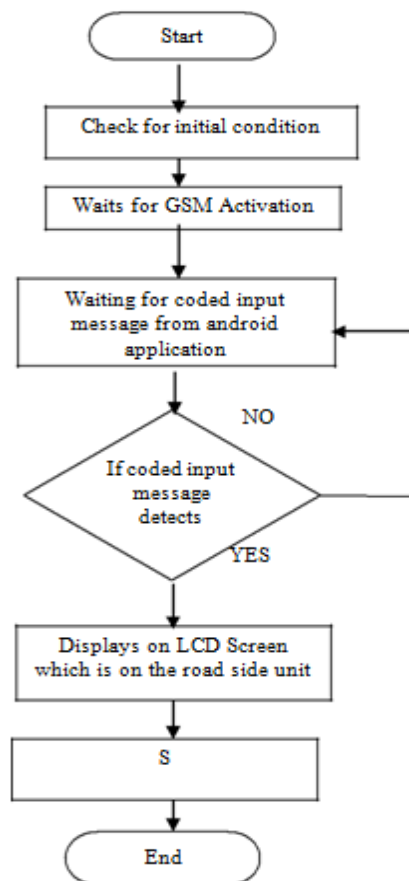


Figure 5: Flowchart of Hardware part

VII. RESULT

When chain snatching occur, the viction has to open the android app, which is designed. when the viction has to tap of text speak, and speak words like 'THIEF', 'KALLA', 'CHORE', 'HELP' which has be code words. immediatiely the camera turns ON and the image is captured automatically and send to the authorised person and video is captured which is stored android device. The video can used for further invertigation abd it can be presented as proof.in this way we can track and alerst the chain snatching.

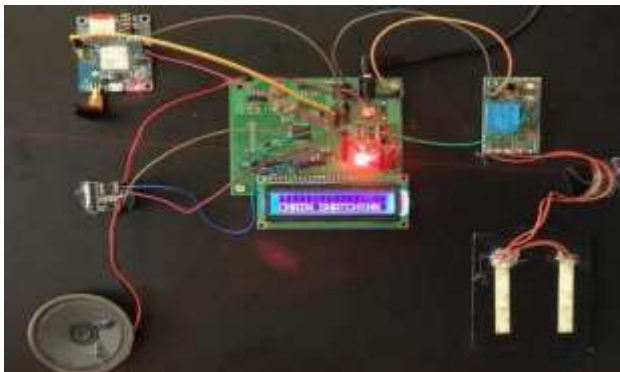


Figure 6: Model of the paper.

VIII. CONCLUSION

The “Real Time Implantation of Alerting and Tracking System for Chain Snatching” system has been developed for public sector and police department to avoid thiefting of chain snatching, the system is a helping hand to police department in solving multiple cases and to reduce the count of chain snatching cases. This system develops a smart electronic gadget that is able to track the culprit and alert the police through the real time transmission of video signals of the scene of crime which helps in solving the complications and providing real time safety.

IX. FUTURE ENHANCEMENT

The project is designed using structured modeling and is able to provide the desired results. It can be successfully implemented as a Real Time system. Going further, most of the units can be fabricated on a single chip along with microcontroller thus making the system compact thereby making the existing system more effective.

The prototype model is tested and the result is encouraging. As per the test result the success rate is more for the uttered words with which the speech processor is coded. If the uttered word is too short or too long or the speech processor is not trained with the uttered word, then the code 66 or 55 or 77 will be displayed on the LCD in the speech processor.

The success rate is more for “Police”, “Help”, and “Chain”. This crime management system provides an easy way to overcome the various crimes occurs in the society. In future enhancement we plan to implant a RF sensor chip in the gold chain with an UID number, when chain has been snatched the sensor sends a unique code to the smart gadget which will be placed in the lamp post and that gadget will keep track of the culprit with the help of GPS system. We can compress the module with the help of VLSI technology and can make it cost efficient. As much as the module is compressed, it’s easy to locate it in the place of interest.

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