

Android Based Human Monitoring and Image Tracking With SMS Alert

M.Ganapathy¹, G.Bharanidharan², G.Senthilkumar AP/IT³
^{1,2,3}*SKP Engineering College*

Abstract- In the M2M Design used PC as terminal User instead of microcontroller. AT commands, a decode module which decodes the text message. Home Security is implemented by if any interrupt occurs, immediately it is detected and controller communicates to the Android Phone via SMS. The system will wait for the reply from the mobile user for some period of time to trigger the buzzer, if there was no reply then system will automatically trigger buzzer. In the phase of the project is our Implementation, Android Application is deployed in the Home. Bluetooth is connected with IR & Vibration Sensor is paired with Android Phone. When IR is triggered or Vibration is detected an immediate SMS Alert is communicated to the House owner along with Location URL & as well as Android Camera is initiated to take snaps. These images are stored in the Server. Once Owner receives an Alert SMS then Owner will see those Images from the Server. If Thief is identified by Owner then he will forward the Location URL to Police & Location is tracked by the Police.

Objective Of The Project-To provide the security in high Secured Area by developing an Android Application

I. INTRODUCTION

DOMAIN SPECIFICATION: ANDROID

Android is made up of several necessary and dependent parts, including the following:

- A hardware reference design that describes the capabilities required for a mobile device to support the software stack.
- A Linux operating system kernel that provides low-level interface with the hardware, memory management, and process control, all optimized for mobile devices.
- Open-source libraries for application development, including SQLite, WebKit, OpenGL, and a media manager.
- A run time used to execute and host Android applications, including the Dalvik virtual machine and the core libraries that provide Android-specific functionality. The run time is designed to be small and efficient for use on mobile devices.
- An application framework that agnostically exposes system services to the application layer, including the window manager and location manager, content providers, telephony, and sensors. A user interface framework used to host and launch applications. Preinstalled applications shipped as part of the stack.

II. PROJECT INTRODUCTION

Recently surveillance systems have become more important for everyone's security. The embedded surveillance system, frequently used in a home, an office or a factory, uses a sensor triggered to turn on

a camera. Some designs use different types of sensors to achieve reliability by means of the different features of each sensor. In this paper we extend our previous design not only by using both multiple PIR sensors and ultrasonic sensors as a sensor group, but also by using the MVM. Ultrasonic receivers and transmitters are located at opposite ends. However, to reduce the interference from other frequencies in ultrasonic signals, we use a coding signal to enhance the ability to distinguish the random interference. To enhance system reliability in the experiment, we focus on how to improve the shortcomings of the ultrasonic sensor. Some research explores the influence of attenuation in air and crosstalk of ultrasonic signals by using a coding signal, while some provides improvement of the ultrasonic signal by using different coding signal types. Other research uses the application of a coding signal to increase resolution and contrast of images. Yet another approach builds a 3D image with an ultrasonic sensor in the PN code that solves the problem with time delay. To enhance the reliability of the ultrasonic sensors group, we propose adding to the number of bits with coding to reduce the probability of code breaking.

III. EXISTING SYSTEM

Nowadays we are using only the Remote videos surveillance mechanism by implementing the video transformation mechanism Through Television. The Admin has to watch those videos continuously if there is any unauthorized movement has identified. To Overcome this drawback there is no big implementation was introduced in the Existing system.

DISADVANTGES:

- Waste of Manpower
- No automatic alert mechanism was introduced when there is a movement.

IV. PROPOSED SYSTEM

In the Proposed system we are fabricating an Ultrasonic Sensor and PIR Sensor . Ultrasonic sensor is used to detect the human movement and PIR sensor is used to detect the temperature of the human being. Once these Sensors are sensed, the web camera is initiated to capture the image unauthorized movement.

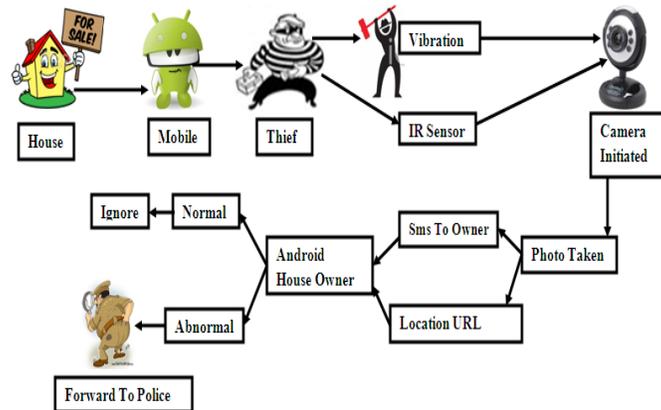
MODIFICATION:

In the modification process, we are generating an automatic alert to the administrator about the unauthorized movement. We are also developing an Android application which is used to view the image of the Unauthorized User from the Server's database.

ADVANTAGES:

- Automatic alert mechanism was introduced.
- The administrator can view the image from their Android mobile itself.

V. ARCHITECTURE DIAGRAM



VI. SYSTEM REQUIREMENTS

SOFTWARE REQUIREMENTS:

- Platform :Windows XP
- Front End :Java JDK1.5.
- Back End :MYSQL
- ANDROID, Eclipse
- Embedded C

HARDWARE REQUIREMENTS:

- Processor: Pentium IV
- RAM :512 MB
- HDD :80 GB
- EMBEDDED FABRICATION KIT

VII. CONCLUSION

Our experiment shows two different types of sensors which are enhancing the overall sensing probability by using the MVM to reduce the shortcomings of both the ultrasonic sensors and the PIR sensors. By adding an ultrasonic coding signal our design reduces the miss rate of the receiver with ultrasonic sensors by different patterns, improving the reliability of the overall system.

REFERENCES

- [1] Jun Hou, Chengdong Wu, Zhongjia Yuan, Jiyuan Tan, Qiaoqiao Wang and Yun Zhou, "Research of Intelligent Home Security Surveillance System Based on ZigBee," International Symposium on Intelligent Information Technology Application Workshops, Shanghai, 21-22 Dec. 2008, pp. 554-57.
- [2] Xiangjun Zhu, Shaodong Ying and Le Ling, "Multimedia sensor networks design for smart home surveillance," Control and Decision Conference, 2008, Chinese, 2-4 July 2008, pp. 431-435.
- [3] L. Lo Presti, M. La Cascia, "Real-Time Object Detection in Embedded Video Surveillance Systems," Ninth International Workshop on Image Analysis for Multimedia Interactive Services, 7-9 May 2008, pp. 151-154.

- [4] Wen-Tsuen Chen, Po-Yu Chen, Wei-Shun Lee and Chi-Fu Huang, "Design and Implementation of a Real Time Video Surveillance System with Wireless Sensor Networks," VTC Spring 2008. IEEE Vehicular Technology Conference, 11-14 May 2008, pp. 218-222.
- [5] Mikko Nieminen, Tomi Raty, and Mikko Lindholm, "Multi-Sensor Logical Decision Making in the Single Location Surveillance Point System," Fourth International Conference on Systems, France, 1-6 March 2009, pp. 86-90.
- [6] Ying-Wen Bai, Li-Sih Shen and Zong-Han Li, "Design and Implementation of an Embedded Surveillance System by Use of Multiple Ultrasonic Sensors", The 28th IEEE International Conference on Consumer Electronics, Las Vegas, Nevada, USA, 11-13 Jan. 2010, 11.1-3, pp. 501-502.