



# International Journal of Innovative Research in Computer and Communication Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 6, Issue 2, February 2018

## Emissary Camcord Revealer : Spy Cam Detector

Bhuvaneshwari S, Deivanai C, Jayashree R, Jessie Jannet Jaquilin J, Malathi Mallaiah M

Assistant Professor, Department of Computer Science and Engineering, Sri Eshwar College of Engineering,  
Coimbatore, India

B.E, Department of Computer Science and Engineering, Sri Eshwar College of Engineering, Coimbatore, India

B.E, Department of Computer Science and Engineering, Sri Eshwar College of Engineering, Coimbatore, India

B.E, Department of Computer Science and Engineering, Sri Eshwar College of Engineering, Coimbatore, India

B.E, Department of Computer Science and Engineering, Sri Eshwar College of Engineering, Coimbatore, India

**ABSTRACT:** Emissary Cam cord Revealer app is a tool to help you detect disguised camera lens that you suspect are present in a room. Equivalent to camera detector mobiles, it tries to detect using the magnetic sensor of your android device. If the magnetic activity in the room seems similar to that of a camera, our app will beep and raise alarm, so that you can further investigate. Hidden Camera Detector app uses your devices magnetic sensor to detect hidden cameras everywhere and makes your phone like a real Hidden Cameras detector. The main aim of this camcorder is to find hidden cameras. Quickly scan any room for hidden cameras and make sure no one is spying on you.

**KEYWORDS:** Camera Lens; Hall Effect; Hidden Camera; Magnetic Sensor.

### I. INTRODUCTION

In recent years, there has been increasing issues relating to the use of mobile phones and camera in restricted areas. A hidden camera or spy camera is a still or video camera used to record people without their knowledge [2]. The main objective of this Emissary Cam cord Revealer is to find hidden cameras present around us [1]. The scope of our project is to find the hidden cameras present around us. This app is a tool to help you detect disguised camera lens that you suspect are present in a room. Equivalent to the camera detector mobiles, it tries to detect cameras using the magnetic sensor of the android device. If magnetic activity seems similar to that of camera in the room, our app will beep and raise alarm, so that you can further investigate.

The hidden wireless cameras, eavesdropping microphones etc. which are used in an illegal way in areas like trial rooms, hotels, and in places of important meetings. So there is need for the detection of signals which are emitted from the hidden wireless camera, microphones, mobile phone. Efforts have been put in place to tackle this issue but they all have their own shortcomings. The circuit can detect the signals during video or audio transmission from hidden camera and microphones also incoming calls and outgoing calls, messages and video transmission from mobile phone.

[1] Our paper deals with the issue of hidden cameras at public places that are very paramount these days. These cameras are secretly put up in changing rooms, theatres and many other places which pose a major threat to the privacy of people. Movie shows as soon as they are released are recorded and put up for public use way before the actual legal CDs are made available in the market leading to huge losses for the actual owners who don't get their share of the benefit. The intention of our project is to maintain the safety and security of people by developing an application, with the help of which spy cameras can easily be detected. Some people might argue that cameras are easy to find and this proposal is therefore unnecessary, but searching for covert cameras is not an easy job. Manually checking their presence is almost impossible, but our system will find its application at such places.

[2] The active cameras are detected using the magnetometer present in the mobile device. The basic principle of our device is Hall Effect [6], which will activate the device's magnetic field.



# International Journal of Innovative Research in Computer and Communication Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 6, Issue 2, February 2018

[3] After the activation of device's magnetic field, the magnetometer [5] will sense the frequency of the hidden devices present in the room, if magnetic activity seems similar to that of camera in the room, our app will beep and raise alarm, so that you can further investigate

[4] Our application is provided with another option of detecting the hidden cameras using Infrared. Click the infrared detector option and scan the room for white light that appear on screen but not visible to the naked eye. Such white light indicates the presence of camera in the room. It could be an infrared camera.

## II. RELATED WORK

In [7] author deals with the paper is that preventing the use of mobile phones and thus detecting them in the restricted areas like examination halls and confidential rooms. As we know that mobile transmission detector can sense the presence of activated mobile phones. The range of this detector is one and half meter. This can also be used for detecting the use of mobile phone for spying and unauthorized video transmission. This circuit can sense in the silent mode also. LED starts blinking when bug detects RF transmission signal from an activated mobile phone. Information provider system with the detector circuit is provided. The detector sends the signal to the receiving antenna which is sensed by the info provider system. Result is displayed on LCD and the buzzer starts beeping.

## III. METHODOLOGY

The application starts with a greeting from the Home Page where the options such as Detector, How To Use, Tips And Tricks will be displayed and the user can able to select their field[3].

### HOME PAGE

Emissary cam cord revealer is a tool that helps you to detect disguised camera lens that you suspect are present in a room. Equivalent to camera detector mobiles, it tries to detect using the magnetic sensor of your android device. In this page our app provides the user with three options such as Detector, How To Use, Tips And Tricks[9][10].

### DETECTOR

The detector option provides the user with two categories such as Detect using magnetometer and Detect using infrared rays from which the user can select the appropriate one.

### DETECT USING MAGNETOMETER

A compass is a simple type of magnetometer [12], one that measures the direction of an ambient magnetic field. It senses whether spy camera is available in that location or not, and alert the user by generating beep sound. If we click magnetometer then it will check for nearby camera with the help of Hall Effect.

If the frequency ranges between 35 to 50  $\mu\text{f}$ , then the app shows that No Devices Detected.

If the frequency ranges between 51 to 65  $\mu\text{f}$ , then the app shows that Mobile or Computer Devices Detected.

If the frequency ranges between 67 to 99  $\mu\text{f}$ , then the app shows that Speaker/Microphone Devices Detected.

If the frequency ranges between 100  $\mu\text{f}$ , then the app shows that Camera Devices Detected.

If the frequency ranges between 380  $\mu\text{f}$ , then the app shows that Very High Radiation Detected.

### DETECT USING INFRARED RAYS

Our app has one more tool which will detect the camera using infrared lights. Just open the infrared detector and scan for white light that appear on screen but not visible by naked eye. Such white light indicates the presence of camera in the room. It could be an infrared camera [4].

# International Journal of Innovative Research in Computer and Communication Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 6, Issue 2, February 2018

## ALERT SIGNAL

Once any radiated devices are detected then an alert will be given to users mobile by generating a beep sound and necessary action will be taken [11].

This system consists of the following components as explained here.

Figure 1 shows the Working flow of Emissary Cam cord Detector.

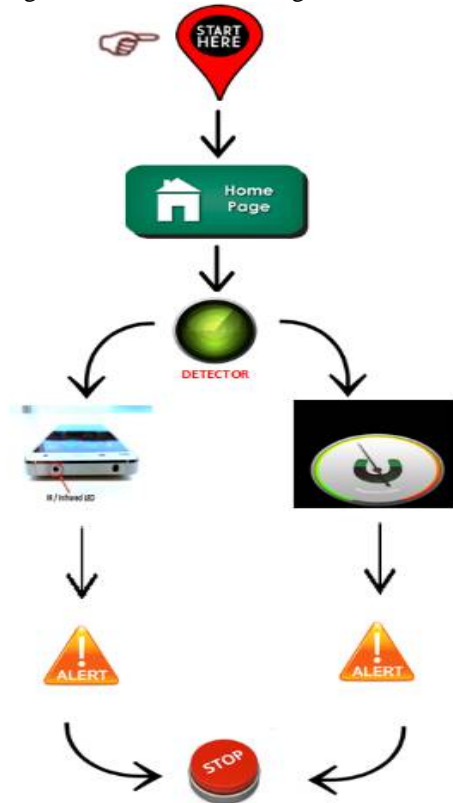


Figure 1: Working flow of Emissary Cam cord Detector

# International Journal of Innovative Research in Computer and Communication Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 6, Issue 2, February 2018

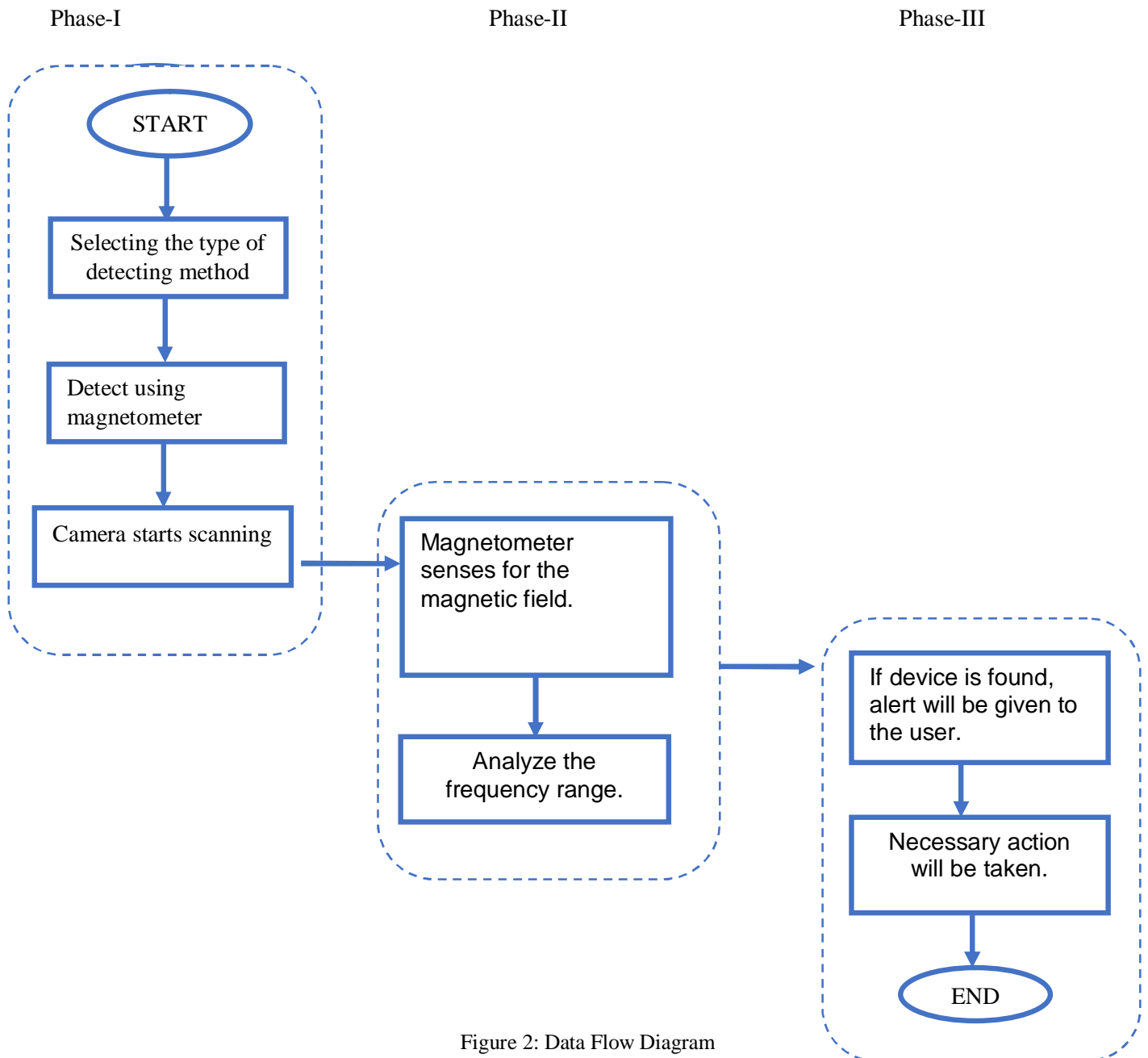


Figure 2: Data Flow Diagram



# International Journal of Innovative Research in Computer and Communication Engineering

*(A High Impact Factor, Monthly, Peer Reviewed Journal)*

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 6, Issue 2, February 2018

## Phase 1

Selecting the type of detecting method:

The type of detecting mechanism will be selected by the user.

Detect using magnetometer:

The magnetometer will start to sense the magnetic field.

Scanning:

The camera in the device will start to scan the area for hidden devices.

Phase 2:

Sensing magnetic field:

The magnetometer will start to sense for magnetic field based on the frequency range.

Analyzing the frequency range:

. The frequency of the cameras in nature ranges from 25 to 65  $\mu\text{T}$  (0.25 to 0.65 G)

Phase 3:

Alert generation:

If the frequency of the hidden device matches with the frequency of the camera then alert will be given to the user by producing beep sound.

Action to be taken:

After finding the hidden camera in the area, necessary action will be taken.

## IV. RESULT AND DISCUSSION

This paper detects RF signal which are emitted from the mobile phones and the hidden wireless camera during incoming and outgoing calls, messages and direct video transmission from one device to another with the alert system. This will continuously monitors the RF level with in a room. If the RF signal level increases a buzzer will turn on and sounds until the signal level reduces and the LCD display displays "DEVICE DETECTED".

## V. FUTURESCOPE

The further idea of this project is trying to increase the detecting range by using the preamplifier stage using JFET or MOSFET transistor used in an interface between the capacitor and IC. Being able to detect the Bluetooth transfer. Current system only detects the 2G/3G transmission signals and can improve the detecting range for upcoming 4G and 5G transmission signals. To determine the exact position of mobile phone and camera hidden in a room by using GPS module. Though this feature is available within the same, the motive is to take it to an advanced level.

## VI. CONCLUSION

Emissary Cam cord Revealer app will detect spy cameras that are present in the trial rooms, theatres and many other public places where it is prohibited. Manually checking the presence of hidden cameras is almost impossible; our system is an efficient method for detecting cameras because no matter how small the cameras are, they can be easily detected around an area of 50m. In confidential meetings, even after the heavy checking of people, they manage to skip all the security and take cameras inside the room to record the conversations and use them for some illegal purposes. So our application will be a great tool that would help in detection of cameras in restricted area.

## ACKNOWLEDGEMENT

We are glad to thank Ms.Kavitha M.S, Ms.Bhuvaneshwari.S and Ms.Lina Dinesh for guiding us about the whereabouts of spy camera detector. We extend our sincere thanks to Mr.NaveenDurai.K who have helped us in availing the required technology in developing our Emissary Cam cord Revealer application.



ISSN(Online): 2320-9801  
ISSN (Print) : 2320-9798

# International Journal of Innovative Research in Computer and Communication Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 6, Issue 2, February 2018

## REFERENCES

- [1] Vaishali Koul, RakshitaMacheri, RibhuVats, Liya baby, Poonam Bari; Hidden camera detection; 7<sup>th</sup> international conference on recent trends in engineering, science and management; April 2017.
- [2] Gayathri N.T Sivasakthi, "Presence of active mobile phones and Hidden camera detection", International journal of computing communication and information system Volume 8 2016.
- [3] Marc Roessler, "How to find hidden cameras",25 March 2002.
- [4] K. Sonasri , K.VenkataPriyanka,"Detecting and disabling digital cameras using image processing", P.S.R.R college of engineering.
- [5] Norman F.Ness, Kenneth W.Behannon, Ronald P.Lepping, Kenneth H.Schatten; "Use of two magnetometers for magnetic field measurements on a spacecraft", 20 SEP 2012.
- [6] SafaKasapDepartment of Electrical EngineeringUniversity of SaskatchewanCanada; "HALL EFFECT IN SEMICONDUCTORS",6 November 2001.
- [7] "Active Mobile Detection with Information Provider System", International Journal Of Advanced Research In Engineering Technology & Sciences. ISSN: 2394-2819 by Ms. Ghazala Ansari.
- [8] "The 808 Keychain Micro Camera". WordPlop. 15 October 2010. Retrieved 19 September 2012.
- [9] Christian C. Mbaocha. 2012. "Design and Implementation of Intelligent Mobile Phone Detector". Academic Research International. Vol. 3, No. 1, July 2012.
- [10] Kanwaljeet Singh, Mandeep Singh and Neena Gupta. "Design and Implementation of Cell-Phone Detection based Line follower Robot". International Journal of Electronics and Computer Science Engineering. ISSN-2277-1956.
- [11] Rita Cucchiara,Andrea Prati andRoberto Vezzani ;"A multi-camera vision system for fall detection and alarm generation" Version of Record online: 18 OCT 2007.
- [12] IEEE; "Geometric Approach to Strapdown Magnetometer Calibration in Sensor Frame"-IEEE Transactions on Aerospace and Electronic Systems( Volume: 47, Issue: 2, April 2011 )