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SURVEY ON DETECTION OF HIDDEN CAMERAS AND MICROPHONE

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ABSTRACT

This paper wants to aid in maintaining the safety and security of people by developing an application with the help of which spy cameras can easily be detected. It discovers application in courts and other places where cameras are not permitted. The camera retroreflects the light beam, and then images are captured, which are subsequently used to detect the camera. The area to be protected is scanned by normal led light. Finally, colour segmentation is employed to find the green component that represents the area where the camera is present.

Keywords: Retroreflection, Overexpose, Charged Coupled Device, Thresholding, Colour Segmentation, Image Processing.

I. INTRODUCTION

A technology, the usage of mobile phones has so become vast that are allowed to use in the private areas or restricted venues like offices, conference halls, malls, lodges etc only for the purpose of their important and personal use. But even in-terms that , there are some places where they don't allow the people to get their mobile phones inside Local or private area with an argument "this is a restricted place and please submit your devices to avoid any disruption". There are some cunning natures in the society who're living only with a purpose "take advantage over the people and make it a business". Women life plays a major role in that when it comes to the privacy and security. In some areas, there are cameras placed in that area and no doubt if there is a min spy camcorder then everything will be detected. Camcorders or cameras at hidden places are the one that is very paramount these days. The data get exploited in the public that may threaten their life and also leading to their death.

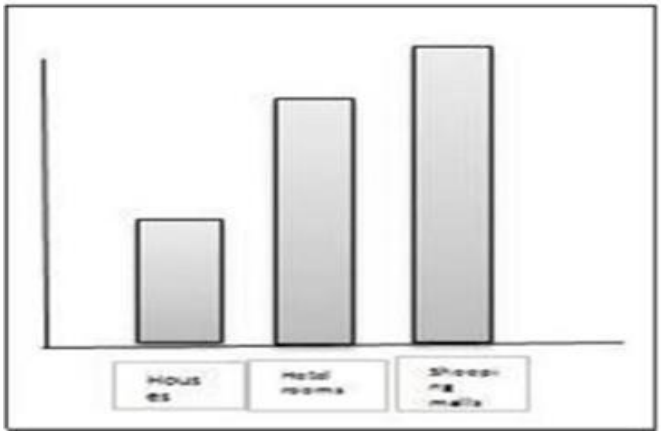

Fig 1: Shows the analysis of placed cameras in different cluttered areas

Few actions were taken into the considerations but not as many. Hence during this thought process, we've Planed to designe and develope an IoT based android application where the sensor senses, detects Camera.

II. LITERATURE RESEARCH

Method A number of systems are already present which use different types of technologies to detect spy cameras at different places. Few such technologies are as follows:

According to paper [1] Detecting Hidden Streaming Cameras

The magnetic activity in the surrounding region is analysed by the Hidden Camera Detector, and if a likeness to a camera is identified, an alarm is generated for further inquiry of the spy camera. It's used in courtrooms, hotel

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rooms, and other areas where cameras are present. hidden. Infrared lights may also be detected by this app. Also helps sharing of the location with friends easily. The magnetic sensor in your phone is required for the radiation metre feature to work; otherwise, this feature will not work.

According to paper [2], Glint finder-camera detector

An android user application based on the principle of retro reflection and is used mainly for hidden camera lenses and dropped part of contact lenses. Essentially, it looks for the lens glint emitted by the concealed camera optics.. A camera flash is used to achieve retroreflection, which appears as hotspots in the output image. Flash rate and duty cycles depend on the device's capability.

According to paper [3]. The radio frequency detector of active cameras

It involves a circuitry consisting of a number of resistors, a few capacitors, some typical ICs and piezo-buzzer which makes a sound when a camera is detected. The basic principle of this device is a disc capacitor to detect the cell phone signal with frequency of 0.9 to 3 GHZ within a range of 1.5 meter radius. [1]

According to paper [4], HIDDEN CAMERA DETECTION(pirate eye)

The technology continuously records the theatre, capturing the recording camera and sending images to the authorities.. The pirate eye has a software built in which detects the camera and highlights the exact location of the recording camera with a red circle around that portion and the pirates are caught red-handed in the act. It features a network operation centre that sends an alert to the theatre authorities when something goes wrong.. It is an invasion of privacy of the audience for the sake of entertainment industry. It instils a sense of hatred in the minds of those who are continuously on the lookout. Innocent people are sometimes caught in the act when they aren't even involved.

III. COMPARATIVE ANALYSIS

Paper Name:

Detecting Hidden Streaming Cameras

Author:

Kevin Wu, Brent Lagessey

Proposed System:

Related research has focused on identifying services, applications, websites, and connected devices with various detecting mechanisms. Since network traffic contained critical information regarding communicating entities and ongoing communications, most of the research concentrated on detecting targets by utilizing the data embedded within network traffic. Some studies introduced in perform timing analysis is also related to work.

Limitations

If an attacker switches from an interframe compression algorithm such as H.264 to an intraframe or constant bit rate compression algorithm then our technique will be ineffective at detecting that camera; however, this switch comes with a cost of increased bandwidth usage. While many cameras still support MJPEG our experience has been that the cameras we have evaluated default to H.264 and some of them no longer

include MJPEG support.

Paper Name:

Detection of Hidden Spy Cams in the Public/Private Areas using IoT based Mobile Application

Author:

Sarikonda Meghana1, Syed Abdur Rauf Magrabi2

Proposed System:

In this paper, they have developed an IoT based Android mobile application that is used for probing the hidden spy cameras for the recording the person's activity in the cluttered environmental areas like trail rooms of shopping malls, the knob or bolt of a room door in hotel rooms. This application works only if there is an IR sensor that has been already built at the time of mobile making

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Limitation:

In the application, there are various features that are not implemented, which means the user cannot entirely depend on single application.

IV. CONCLUSION

This paper surveys as an approach for detecting the cameras in the cluttered environments and can also be detected when lights turned off using flashes (an old practical method) for getting prevented victim from the Scandal issues. This application provides an assurance for maintaining the security to the top level extent in our lives.

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V. REFERENCES

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