

Controlling the dedicated camera using subscriber identity module (SIM) through mobile.

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Abstract—Till now we have seen so many kind of security surveillance options like the camera will be mounted top most corner of the room to check out the happenings around the premises. Basically there will be room where the recording of the video will be happening all over the 365 days of a year and we can see the video through display monitors or the television set connected to the recording device the draw back of this is we can see the live telecast only and also we cannot view anything if we are out of the place. Later the advance model of this has been developed so that from any where we can watch over our house, industry and so on. But for this we need to pay lump some of money to the service provider, storage purpose and also for the internet service provider as well (ISP).

To reduce the cost, I have came up with the solution using subscriber identity module(SIM). Here the camera is provided with a sim slot to get the signal and initiate the process of recording and as well as taking pictures of the site. The usage of the service is very easy just like calling to another mobile. After calling automatically it picks the call start working as we need. Using the keypad we can rotate the camera in different directions to watch out all corners of the area. This is very cheap way of securing and getting access to the area from remote place and as well as when we are traveling as well.

Keywords— *ISP, SIM, IP*

I. INTRODUCTION

Surveillance cameras are used typically for surveillance purposes in organizations and public places. Surveillance cameras play a critical role in providing evidence against crimes, industrial and unlawful activities. The surveillance technologies have become mature and sophisticated with the passage of time. The surveillance cameras are serving as an important defensive tool in today's environment as they help Enhancing employee safety thereby reducing the fear of Irregularities.

•Necessity: The use of camera systems must be justified empirically, ideally by an independent authority. Objectives and intended outcomes must be defined.

•Proportionality: mobile equipment must be appropriate for the problem it is intended to address. Technology should "respond to the established objectives, without going further." Data should be protected and the length of time it is retained be clearly defined.

Sometimes mobile surveillance are the best and most cost-effective option for security and surveillance installations. For

example it could be useful in industry buildings, where the installation of cables would damage the interior, or within facilities where there is a need to move cameras to new locations on a regular basis. The technology can also be used to bridge sites without expensive ground cabling.

Now a day's video surveillance is playing major role in securing the sensitive places[1],[5]. The idea behind this is to safe guard our premises[1] with minimal budget. Even though there are so many different surveillance products in the market but they have big price tags. To reduce the cost and as well as the easy usage is the main motto of this idea. The existing surveillance products work based on the internet service provider[3] or it records on huge magnetic disks to store the content. In the traditional way of providing security contains some of the disadvantages like we can see the display only if your in-front of the display system.

It's like only when we sit inside the premises like shop,store or small scale industry where we mount the camera. To overcome this some of the companies come up with the solutions like adding up internet power to the camera. So that we can see the complete area of site. For this to happen we need to tie up with companies who are providing that service. For this we need to pay the annual fees or monthly basis. And also we need to pay for the internet service as well.

The company will provide the credentials for accessing their website. Once we get credentials we can access our camera to view the site. When ever there is a third party introduction there will be burden for the customer to use any kind of product. So considering all the pros and cons of existing products, I am interested to develop a security surveillance which is reliable, cost effective, long life of the devices and easy usage of the product.

Working principle of the idea is camera will be having the SIM[2] slot just like we can see in mobile phones. And also there will be a expandable memory slot where we can store the data. As all the SIM will get unique number to identify themselves even this also works as same. From any other mobile when ever we call to the number which is placed in camera will be activated and we can see the area.

Using the keys which are available on keypad will be used to rotate the camera in different directions. Like number 2 is used to rotate the camera upside , 4 is used to rotate left , 6 is used to rotate right and 9 is used to rotate down.When we

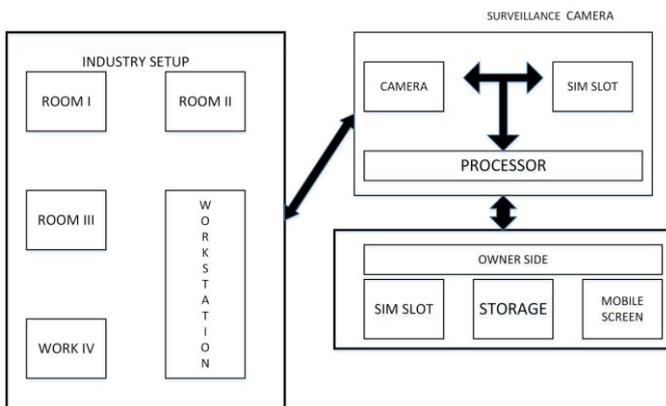
press button 5 then it will take photo snap and it will send to us through MMS. In this way we can reduce the cost of security surveillance[6].

II. EASE OF USE

The main purpose of proposal is it works in off line mode which reduces internet cost. Here the camera take photos at an interval of every 20 minutes to the registered mobile.

Case 1: If there is no change it works normally like again sensing the situation.

Case 2: If there is any abnormality it takes the video after the registered user calls to the sim in the device and the video is sent as an MMS(multimedia message) to the registered user.



There's a wide mixture of security cams accessible. Some are extensive and out in the open, and may serve just to recognize strange exercises from not withstanding approaching a work spot, while others are minor and intended to stay escaped perspective. In case you're considering setting up some sort of feature observation framework in or around your industry, there are a great deal of things to ask yourself before beginning.

Before you really put resources into a security cam framework, you have to consider what you'll be viewing and what you require keeping in mind the end goal to watch it. The quantity of cams you need is presumably the first question that ought to ring a bell. Is it true that you are concentrating on one room in the business, or do you have to watch out for a few separate parts of the business? Will you have to screen outside action and in addition indoor? In case you're just observing more than one room, you'll presumably require only one cam, yet including more territories obliges a greater cam framework.

Numerous cam frameworks are uncomplicated, Here you put the cam lens is vital. The separation of the cam from its subject ought to be deliberately viewed as, verifying the right zones are in center and obviously obvious. On the off chance that you mount a cam to a divider or structure, verify its mounted legitimately so the cam won't shake and contort the photo. Open air cams can dissuade offenders from constantly endeavoring a break-in, and they can cover huge zones, however a cam put outside ought to have a suitable weatherproof packaging to shield it from the components.

Extreme housings can likewise counteract altering or vandalism.

You ought to additionally figure out if or not you'll need to record your observation. A direct feature sustain with no recorder ought to be sufficient. At the same time on the off chance that you wish to see what's going on in a specific region over drawn out stretches of time, you ought to join a recording framework that is good with your security cams. A few individuals use VCRs to record feature, while others run the entire framework by means of a cell phones and spare data digitally utilizing SD cards. To abstain from squandering feature, some observation frameworks have movement locators that just start recording once the gadget grabs development inside the zone.

III. WORKING

Video compression utilizes a homogeneous method as that of still image compression. However, it integrates compression between the frames to further reduce the average file size. MPEG is one of the best-kenned audio and video compression standards and was engendered by the Kinetics Picture Experts Group in the tardy 1980s. MPEG compression utilizes one frame as a reference. Each supplemental frame preserves and conveys only the image information that is different from the pristine.

If there is diminutive change between the images, there will be few differences resulting in a high compression ratio. With consequential kinetics in the images the compression ratio will be much lower.

The video is then reconstructed at the viewing station predicated on the reference image and the "difference data." MPEG video compression leads to lower data volumes being transmitted across the network than with JPEG. With a circumscribed bandwidth available, users can opt for a constant bit-rate (CBR), which engenders a constant, pre-set bitrate.

Motion JPEG

1. Image size x frames per second x 3600s = KB per hour / 1000 = MB per hour
2. MB per hour x hours of operation per day / 1000 = GB per day
3. GB per day x requested period of storage = Storage need

MPEG

1. Bit rate / 8(bits in a byte) x 3600s = KB per hour / 1000 = MB per hour
2. MB per hour x hours of operation per day / 1000 = GB per day
3. GB per day x requested period of storage = Storage need

However, the image quality will vary depending on the amount of kinetics in the scene. As an alternative, users can utilize a variable bit-rate (VBR) where parameters can be set to maintain high image quality regardless of the kinetics in the scene. This option is generally preferred in surveillance

applications. Because the genuine bit-rate will vary with VBR, the network infrastructure must have enough capacity to convey the video.

Here in our proposal for example we consider a small industrial setup with four rooms, one workstation. If we need to monitor this setup we need at least ten cameras each camera's has been installed with a processor, memory and sim slot. When the person is not in the factory and if he needs to know what happens at the place he will call to the particular camera so the camera will record the incidence for small moment. Then it will transfers recorded video to the owner. similarly he calls the other sim's which are connected to the camera likewise are recorded and transfer to owner.

IV. CONCLUSION

When we employ this it reduces risk factor and cost. The proposed method reduces the effort for surveillance of the small scale industry for the owner. It gives an effective results which reduce the cost of data plan and are efficient up to 70 percent compare to the earlier methods.

The further more improvement and implementing in large scale industries will still more the cost.

Basic structure of surveillance:[16]



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