International Journal of Information Sciences and Application (IJISA). ISSN 0974-2255, Vol.11, No.1, 2019, (Special Issue)

Android Phone Based Video Surveillance System using SMS Notifications

Arpit Mishra[1], Lalit Verma[2], Abhay Kumar Pandey[3], Divyanshu Singh[4]

[1,2,3,4] Department of Information Technology,
IMS Engineering College (Affiliated to AKTU), Ghaziabad, India,

Ravi Shankar Pal(Mentor)
Assistant Professor,
IMS Engineering College, Ghaziabad

ABSTRACT

This paper presents design to boost police work applications supported the usage of the service directed paradigm, with mechanical man good phones as user terminals, permitting application dynamic composition and increasing the flexibility of the system. According to the results of moving object detection analysis on video sequences, the movement of the individuals is half-track exploitation video police work. The moving object is known exploitation the image subtraction methodology. The background image is subtracted from the foreground image. From that the moving object is derived. So the frame rule and also the threshold worth is calculated to search out the moving image. Using frame algorithm the moving frame is identified. Then by the brink worth the movement of the frame is known and half-track. Hence the movement of the object is identified accurately.

I. INTRODUCTION

Video police investigation systems have increase their desires of dynamism so as to permit totally different the various} users (operators and administrators) to watch the system choosing different QoS counting on the system status and to access live and recorded video from totally different localizations, as an example, from their mobile devices.

More concretely, in IP surveillance systems some resources involved are limited or expensive so dynamic reconfiguration could become competitive advantage for system integrator and designers able to offer flexible applications adaptable to users' needs. Advances in programming paradigms have allowed increasing the dynamism and

flexibility of distributed environments. Concretely, Service-Oriented approaches provide means of developing decoupled applications in heterogeneous networks by defining the concept of service. A service, in the SOA context, is an entity that receives and sends messages through well-defined interfaces, allowing building more complex applications that increase the value of the system.

This concept will be applied to QoS-aware (Quality of Service) systems, in order to ease the configuration and reconfiguration of applications.

Besides, Android is a software stack for mobile devices that includes an operating system, middleware and applications that can be suitable for the development of the end-user surveillance application.

For varied laptop vision applications, background subtraction (BS) is a “quick and dirty” way of localizing moving objects in a video shot by a static camera.

In this perspective, motion detection is often the first step of a multi-stage computer vision system [8, 20, 24, 25] (car tracking, person recognition, wild-life monitoring, etc.). For this reason, it is usually required to be as fast and as simple as possible. Consequently, most BS methods label “in motion” every pixel at time t whose colour is significantly different from the ones in the background .

This answer has tested in whenever the camera is strictly static with a set noise-free background.

II. RELATED WORKS

Dynamic Web Service Composition Problems and Solution - Since the web has evolved as a service provider in all areas, there are few problems which are to be handled. Some challenges faced by web services are related to security, quality of service and composition. Among all the challenges, web service composition turns out to be an area of major research, because it supports business-business or enterprise application integration. With the emergence of semantic web the scope for semantic based web services composition increases as it provides better results compared to the traditional method of discovering candidate services for composition. Along with the semantics the nature of composition also needs to be dynamic as the web services and its parameters are changing frequently. This paper is a survey about the existing methodologies for semantic web services and discusses various solutions for various problems faced by semantics and dynamic based web services composition.

No-Heap Remote Objects for Distributed Real-Time Java - This paper presents an approach to provide real-time support for Java’s Remote Method Invocation (RMI) and its integration with the RTSJ memory model in order to leave out garbage collection.

A new construct for remote objects, named No-heap Remote object (NhRo), is introduced.

The usage of a NhRo guarantees that memory required to perform a remote invocation (at the server side) does not use heap-memory.

Thus, the aim is to avoid pickup within the remote invocation method, improving predictability and memory isolation of distributed Java-based real-time applications.

The paper presents the bare model and the main programming patterns which are associated with the NhRo model.

Sun RMI implementation has been changed to integrate the NhRo model in each static and dynamic environments.

Android Mobile Operating System for i.MX Applications Processor Platforms - Android is a free, open source and fully customizable mobile platform supported the Linux® kernel.

Android offers a full vertical software stack: an operating system, middleware and key applications. It conjointly contains an upscale set of genus Apis that permits third-party developers to develop great applications. Freescale now supports Android with a board support package (BSP) that is ready to be tailored to pick out i.MX platforms.

The i.MX51 multimedia applications processor running Android is an excellent platform for building a high-performance, low-power and cost-effective mobile device that successfully passes the Android Compatibility Test Suite (CTS). The reference hardware, images, source patches and documentation are available now for the i.MX51. Evaluation Kit www.freescale.com/imxandroid.Freescale enables our customers with integrated hardware/software solutions to realize faster time to market, and the Android platform provides a compelling and innovative end user experience to support this effort. Using a layered approach

with the correct choice of elements to interface into the robot stack leads to a lot of complete and prepared solution. Customers will be able to directly develop applications on this integrated solution or easily modify their own drivers based on free scale's i.MX Android BSP.
Existing System In the existing system, the moving object is identified using the some algorithms which are not exactly doing that detection works. The image comparison is very difficult process in many existing systems. And conjointly there's no accuracy within the image sequences. Moreover there is no alert system to inform the admin when unknown object is detected.

Image Retrieval from the remote place is completed within the existing system.

III. PROPOSED SYSTEM

In the Proposed system, the moving object is identified using the image subtraction method. The background image is subtracted from the foreground image. From that the moving object is identified. Here we can detect the exact image of the moving object.

Another advantage of this technique is once associate degree unknown image is captured by the system it'll alert the user mechanically by causation associate degree SMS to user's mobile.

User are going to be victimization humanoid Mobile for the Retrieval of pictures from the remote place to grasp whether or not those pictures area unit vital and may be unnoticed.

If some known people would have entered in the closed room, which can be ignored, as they are reliable people. In this paper, we present a QoS-aware service-based architecture for surveillance systems, and a prototype of this architecture, where a video surveillance application is developed over the Android platform. The proposed system provides various advantages which are as follows. It provides high accuracy in image capturing. It sends associate degree aware of user's mobile whenever a replacement object is detected.

The users can view the image, or video clips via his Android mobile itself. It effectively utilizes the background subtraction algorithm.

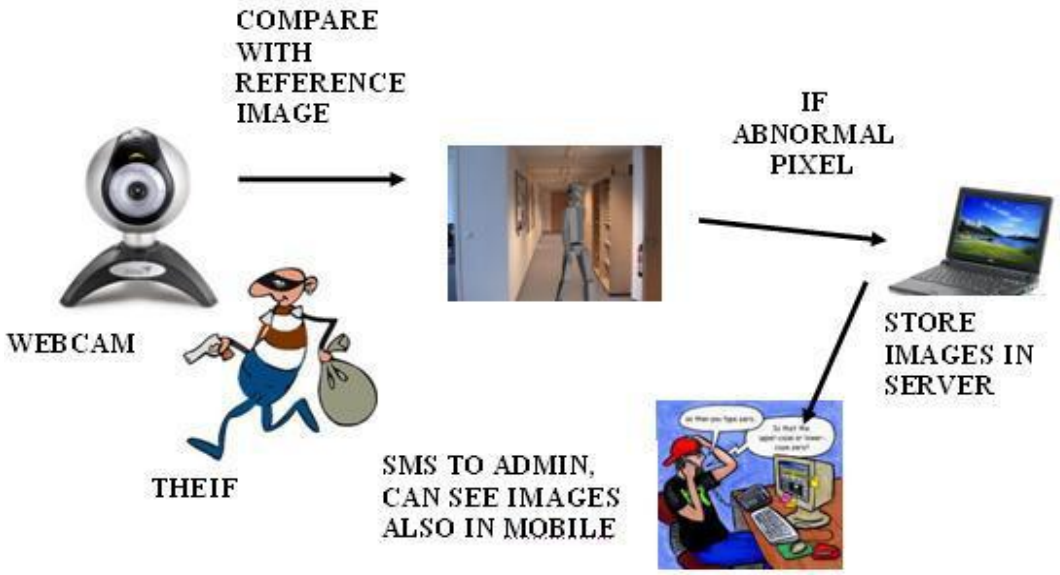

Fig. 1. Architecture Diagram

The Programming paradigms have allowed increasing the dynamism and flexibility of distributed environment. Advantages of proposed system are high accuracy in image capturing, Send an alert to user's mobile whenever a new object is detected, User can view the image, or video clips via his Android mobile itself, efficient use of background subtraction algorithm.

IV. MODULES

A. User Registration

B. Reference Image Capturing

C. Background Subtraction Algorithm

D. Server

E. Alert SMS

F. Image Capturing by ANDROID

A. User Registration

This process is registered by providing Name, Mobile number, Address for communication & other personal information. User access the main server through ANDROID implementation to fetch out the image of the thief. Android SDK installed in a Android mobile platform of the user. The ANDROID coding is converted into DEX file and then fused into a Android Enabled Mobile phone.

B. Reference Image Capturing

Web camera is connected with the place that is to be monitored.

Once the admin locks the door, he will be switching on the Web camera device for capturing the image.

The Web camera captures the primary image that is unbroken because the Reference image for additional process.

This reference image is always compared with the next following images for the sake the intruder detection by applying Motion detection algorithm.

C. Back ground Subtraction Algorithm

Background Subtraction Algorithm is applied to find out the Motion in a particular room. The web camera is kept for further process. The reference image which is taken by the camera is compared with the further images taken by the camera. If same image persist the no alert is initiated, if some movement or the motion is detected by the web camera, immediately, the triggers Back Ground Subtraction Algorithm, for further process. This Back Ground Subtraction Algorithm is effective in processing the subtraction the present suspected image with the previous Reference image. If there is any pixel change with respect to the reference image, immediately it alerts the server.

D. Server

The main server can have the information of the admin's mobile range and additionally the server is connected with the portable for causation Alert SMS to the admin's mobile.

If there is any pixel change after applying Back Ground Subtraction Algorithm, immediately system alerts main server to initiate JSMS package to send SMS to the admin's Mobile as

well as begin recording all the frames within the main server.

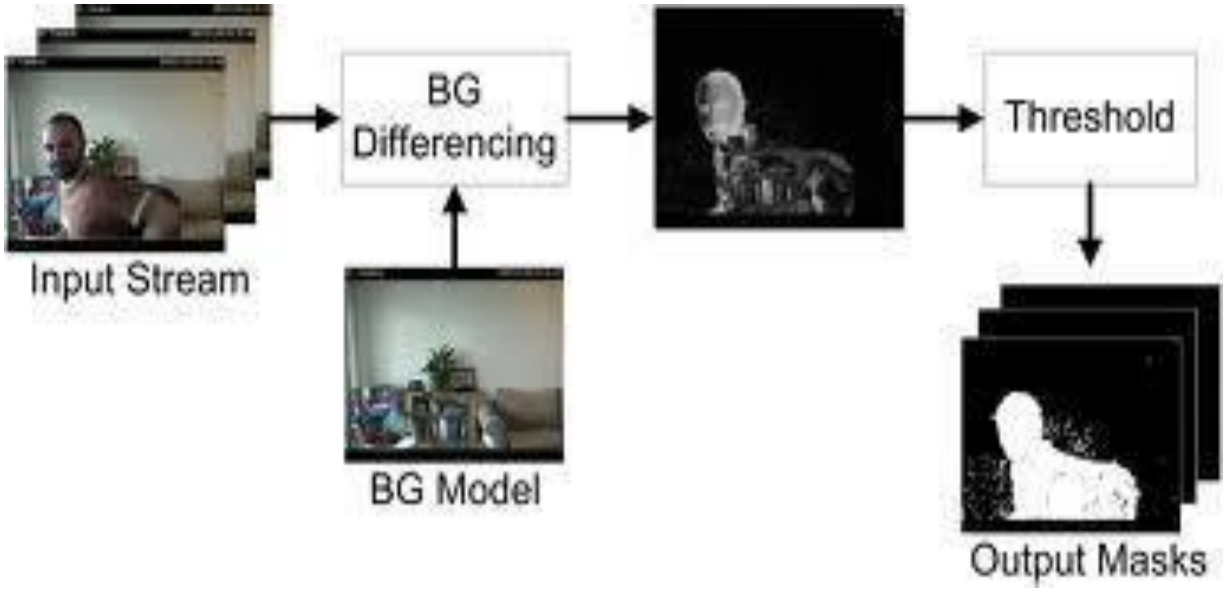

Fig. 2. Background Subtraction

E. SMS Alert

If motion detection is confirmed, immediately system initiates the Mobile phone connected with the server for sending Alert SMS to the Admin's Mobile number. We use JSMS package for sending SMS to the Parent's Mobile. Admin will be receiving an Alert SMS "Motion Detected" in their mobile phone.

F. Image Capturing by ANDROID

Once after receiving the alert SMS to the admin's mobile, admin will then login through his mobile to access Main Server via ANDROID package which is installed in his mobile[10]. Admin can see whether, the really thief has

entered in or the Genuine people entry via Image which is recorded by the web camera then after initiating Alert SMS. The admin can decide then after either to neglect, if any genuine person has entered, or take action if thief has entered. To decide this admin not required to come directly, he can see through his Mobile phone via ANDROID connection.

V. CONCLUSION & FUTURE ENHANCEMENTS

The implementation process in which a routing table is generated using trust value from each node. This table is used to avoid the colluded truncation attack.

A double secret writing mechanism is provided to every block of knowledge through that security problems like Eavesdropping and Alteration area unit prevented.

This also ensures confidentiality, integrity, authentication, authorization and scalability of the mobile agent.

This paper minimizes the colluded truncation attack by trust price and additionally retrieves information firmlyvictimisation computer code secret writing.

Although the whole security is provided to the information the agent isn't utterly securable.

The security for the code has not been provided.

In future security for code are going to be provided and running Mobile Agent in wireless surroundings.

REFERENCES

[1]. Estévez-Ayres, P. Basanta-Val, M. García-Valls, J. A. Fisteus and L. Almeida, “QoS-aware Real-Time Composition Algorithms for Service- Based Applications”, IEEE Trans. on Industrial Informatics, vol 5 (3), pp. 278-288, Aug. 2009.

[2] Selva Kumar S., Ram Krishna Rao M., Deepak Kumar R., Panwar S., Prasad C.S., "Biocontrol by plant growth promoting rhizobacteria against black scurf and stem canker disease of potato caused by Rhizoctonia solani", Archives of Phytopathology and Plant Protection, ISSN : 0323-5408, 46(4) (2013) pp.487-502.

[3] Android Operating System, http://www.android.com

[4] Bhuvaneswari B., Hari R., Vasuki R., Suguna, "Antioxidant and antihepatotoxic activities of ethanolic extract of Solanum torvum", Asian Journal of Pharmaceutical and Clinical Research, ISSN : 0974-2441, 5(S3) (2012) pp. 147-150.

[5] Estévez-Ayres, L. Almeida, M. García-Valls and P. Basanta-Val, “An Architecture to Support Dynamic Service Composition in Distributed Real-Time Systems”, Proc of the 10th IEEE International Symposium on Object/component/service-oriented Real-time distributed Computing (ISORC), May 2007. Santorini Island, Greece.

[6] Sukumaran V.G., Bharadwaj N., "Ceramics in dental applications", Trends in Biomaterials and Artificial Organs, ISSN : 0971-1198, 20(1) (2006) pp.7-11.

[7] OMG, “Data Distribution Service for Real-time systems”. Object Management Group, 1.2 formal/07-01-01 edition, January 2007.

[8] Mahalakshmi K., Prabhakar J., Sukumaran V.G., "Antibacterial activity of Triphala, GTP & Curcumin on Enterococci faecalis", Biomedicine, ISSN : 0970 2067, 26(Mar-4) (2012) pp. 43-46.

[9] H. Schulzrinne, A. Rao and R. Lanphier, “Real Time Streaming Protocol (RTSP)”, RFC 2326, http://www.ietf.org/rfc/rfc2326.t

[10] Sathyanarayana H.P., Premkumar S., Manjula W.S., "Assessment of maximum voluntary bite force in adults with normal occlusion and different types of malocclusions", Journal of Contemporary Dental Practice, ISSN : 1526-3711, 13(4) (2012) pp.534-538.

[11] Dr. T.Nalini, Dr.K.Manivannan Vaishnav Moorthy, Efficient Remote Data Possession Checking in Critical Information Infrastructures Ensuring Data Storage Security In Cloud Computing, International Journal of Innovative Research in Computer and Communication Engineering, ISSN (Online): 2320 – 9801,pp 12-18, Vol. 1, Issue 1, March 2013.

[12] Dr.K.P.Kaliyamurthie, Cervical Cancer Screenig and Classification Using Acoustic Shadowing, International Journal of Innovative Research in Computer and Communication Engineering, ISSN(Online): 2320-9801,pp 1659-1662, Volume 1, Issue 8, October 2013

[13] Dr.K.P.Kaliyamurthie, Automated Information Retrieval System Using Correlation Based Multi-Document Summarization Method, International Journal of Innovative Research in Computer and Communication Engineering, ISSN(Online): 2320-9801,pp 4328-4335, Vol. 1, Issue 7, September 2014

[14] Dr.K.P.Kaliyamurthie, D.Parameswari, Modelling Cloud Storage, International Journal of Innovative Research in Computer and Communication Engineering, ISSN: 2249-2651,pp 1-5, Volume1 Issue3 Number2–Dec2011

[15] Dr.K.P.Kaliyamurthie, D.Parameswari, Implementation of Customized Greencall Algorithm for Energy-Efficient Of Wireless LANs, International Journal of Innovative Research in Computer and Communication Engineering, ISSN: 2249-2615,pp 15-21, Volume1 Issue 1 Number2-Aug 2011.