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Review: Biometric and GSM Security for Lockers

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ABSTRACT

In this review paper we will develop biometric (finger or face) and GSM technology for bank lockers. Because in this system bank will collect the biometric data of each person for accessing the lockers because in this system only authenticated person recover the money, documents from the lockers. So the biometric and GSM security has more advantages then other system. Because biometric is stored individual identity of a person and GSM is used for sending and receiving message.

Keywords – Arm, Biometric, GSM, Lockers, password.

I. INTRODUCTION

In the real world, today people are concern about their safety for their valuable things like stock certificate, heirloom jewels etc.so the bank lockers are the safest place to protect them. Because in day by day life we need to seek new security system because there are some problems in the traditional bank lockers like loss of key, theft alarm dose not required, duplicate key could be generated, so we will develop biometric and GSM based security system to improve maximum level security.

II. BIOMETRIC

A biometric system is essentially a pattern recognition system that recognizes a person based on a feature vector derived from a specific physiological or behavioral characteristic [1] for identify a person. The behavioral characteristic include signature, gait, speech keystroke pattern, and gait these character are changer with age and environment .Physiological characteristic include fingerprint, face and iris etc. This character is remaining unchanged through life of person Biometric system operates as verification mode or identification mode depending upon on the requirement of application

In verification mode, the system validates a person's identity by comparing the captured biometric characteristic with the individual's biometric template which is prestored in the system data base[1].so the biometric is the essential tool for user identification in identify management system now we will discuss about some physical biometric parameter.

1.1Fingerprint

Fingerprints are the ridges and furrows pattern on tip of finger print. and have core around which pattern like swirls, loops, arch are curved to ensure that each print is unique[2].

Arch is pattern where the ridges enter from one side of the finger .rise in the center forming an arc and then exit the other side of the fingerprint.

Loop is pattern where the ridges enter from one side of the finger rise in the center forming an arc and then exit the other side of the fingerprint

And whorl is pattern where ridges are circularly around a central point on the finger print [3]. The ridges and furrows are characterized by irregularity known as minutiae. Minutiae are local ridges which show ridges bifurcation and ridge ending.

2.2 Face

Face recognition system is based on the idea that each human being is different and unique in creation. If we elucidate this, facial structure has parts that are unique to each person like fingerprint. But people do not know about this unique facial structure. Each person has his own facial structure, these lines known as the symmetry of the faces are matched in computer environment and face recognition process takes place [3].

So when the result of the biometric matching carried out in computer system facial structure is compared to the faces on database.in this way biometric system works.

III. GSM

GSM is a global system for mobile communication is mainly used for sending or Receiving data such as voice and message. In this security system GSM plays an important role**.**

1. LITERATURE REVIEW

Sr no	Name of Author	Title	Publication	Concept about work	Advantages	Limitations
1.	Ashish M. Jaiswal and Mahip Bartere	Enhancing ATM Security Using Fingerprint And GSM Technology	International Journal of Computing Science and Mobile Computing Vol. 3, Issue. 4, April 2014	First person inserting card and he place finger in finger print module then 4 digit code will generate through GSM on person mobile and person will entered the code by pressing key on the touch screen then transition will done.	It will provide strong authentication	It is time consuming at initial stage
2.	Aruna D. Mane and Sirkazi Mohd Arif	Locker security system using RFID and GSM Technology	International Journal of Advances in Engineering and Technology, May 2013	The RFID reader reads the data from tag and send to microcontroller where it checks whether it valid or not if the id number is valid then microcontroller sends the SMS request person mobile through GSM to get original password to open the locker when person sends the password to the microcontroller it will verify the password entered by keyboard and received from person mobile if both password are match then only lockers will be open	It is two password based method	It is long process of authentication and time consuming.
3.	Yugashini, S.Vidhyasri, K. Gayathri Devi	Design And Implementation Of Automated Door Accessing System With Face Recognition	International Journal of Advances in Engineering and Technology, May 2013	This paper proposes three main subsystems namely face recognition, face detection, and automated door accessing system. using PCA and FBPCA.	It is robust system	Required large training set.
4.	Raghu ram.Gangi, SubhramanyaSar -ma. Gollapudi	Locker Opening And Closing System Using RFID, fingerprint, Password And GSM.	International Journal of Emerging Trends And Technology in computer science	RFID read id number from passive tag and send to microcontroller if id number is valid then it gives access to fingerprint scanner after matching the finger print microcontroller send password to authenticate person mobile so person enter both the password through key board if password get match then only the locker will be open.	RFID ,finger print and GSM based method	It requires more hardware and time consuming

IV   PROPOSED SYSTEM

The existing security system either based on fingerprint, card or pin based security system. There are some disadvantages of existing system. Because sometimes card could be lost or stolen and pin could be easily hacked or forgotten [2]. But the proposed System based on biometric (finger or face) and GSM security.in this system first the person enter use name and password if the User name and password matches then match finger or face if both matches then send the code on person mobile through GSM and ask for code on pc if this code matches then the locker will be open So proposed system is more secure than existing system. The generalized block diagram of proposed system is shown below.
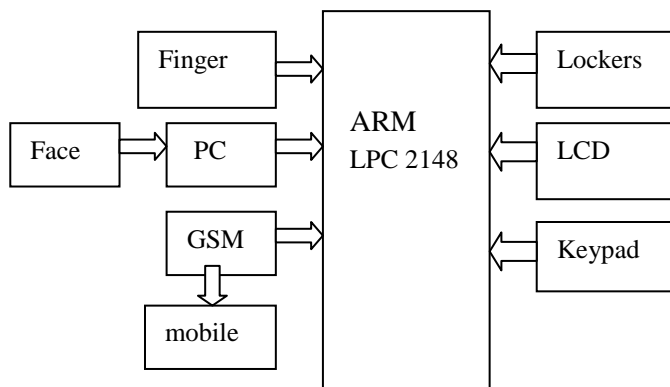
V.   GENERALIZED BLOCK DIAGRAM

Fig: biometric and GSM based lockers security

V.   CONCLUSION

From the review we concluded that biometric and GSM security is provided accurate and fast user authentication. Because biometric cannot be forgotten they are difficult for attackers to forge and for user to repudiate.

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