

## **Research Article**

### **A Survey on Cardless Cash Access Using Biometric ATM Security System**

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**Abstract:** Now a days it is important to upgrade the security in ATM systems. Because more fraudulent activities occurred use of magnetic strip card. And also if we want to know the loosed Personal Identification Number (PIN) means in includes more number of steps, bigger time waste, for this reason I am surveying the following existing papers to provide the better solution for this problems in ATM system.

**Keywords:** ATM; Personal Identification Number (PIN), Security

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#### **INTRODUCTION**

The Biometric automated teller machine or automatic teller machine (ATM) is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. On most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic strip or a plastic smart card with a chip.

Authentication is provided by the customer entering a personal identification number. Using a biometric ATM, customers can access their bank accounts in order to make cash Withdrawals, debit card cash advances, and check their account balance just by using a simple finger print technology [4].

The Finger print approach can be more commonly utilized by the ATM systems because of its advantages in providing non-intrusive environment, and less time consumption in making a transaction.

#### **LITERATURE SURVEY**

##### **ATM Security by Using Fingerprint Recognition and GSM**

This paper describes the essential for improve safety in ATM transactions. Due to great increase in the number criminals and their actions, the ATM has become insecure. ATM systems currently use no more than an access card and PIN for identity confirmation. The Personal Identification Number (PIN) not only gives worthy security. The fingerprint is sole and cannot duplicate by others. This paper combines the pin verification and fingerprint recognition technology for identification. With fingerprint recognition technology and pin verification we fixed the GSM modem

connected to the microcontroller generates the 4 digit one time secret word and it send to the main user mobile number when the user (main user or nominee user) enroll the fingerprint. The fingerprint of the candidate and the card holder are collected and stored in the databank. Every fingerprint which enrolls is check by the db. The 4digit one time password should be entered by pressing the keys on the touch screen. After enter all the correct information customer can begin the further transaction. It also proposed applicants fingerprint identification process while authentic card holder unable to do the transactions. From this paper I talk the OTP concept which is used to recover the password in instance of loss of PIN.

##### **Biometrics and Fingerprint Payment Technology**

In this paper I have survey on biometric payment system. Biometric payment system is used for several types of payment system instead of the tension of cards to put with them and to commit to memory theirs difficult PINs. This system is much safe and protected and very casual to use and even without using any PIN or secret codes to remember as compare with earlier system like credit card payment system, wireless system and mobile system etc. It is reliable, economical and it has more benefits as compare with others. In daily life the usage of credit cards, check card for shopping, bus card, subway card for traveling, student card for library and department, and many kinds of cards for unlimited purposes and so on. So problem is that a person has to take many cards and has to remember their passwords and to preserve secure to take with him all time. So the biometric payment system will resolve this problem. Greater adoption of biometric payment system will drive down the cost of biometric readers and thus making it more reasonable to small business owners.

Biometric payment system is greatly safe and protected and very tranquil to use.

**Advance Encryption Standard (AES)**

This standard stipulates the Rijndael algorithm, a symmetric block cryptogram that can process data blocks of 128 bits, using cipher keys with sizes of 128, 192, and 256 bits. Rijndael was designed to handle additional block sizes and key lengths; however they are not accepted in this standard.

Throughout the remnants of this standard, the algorithm specified in this will be referred to as “the AES algorithm.” The algorithm may be used with the three dissimilar key lengths indicated above, and therefore these different “flavors” may be mentioned to as “AES-128”, “AES-192”, and “AES-256”. This encryption standard is used in my project to encrypt the

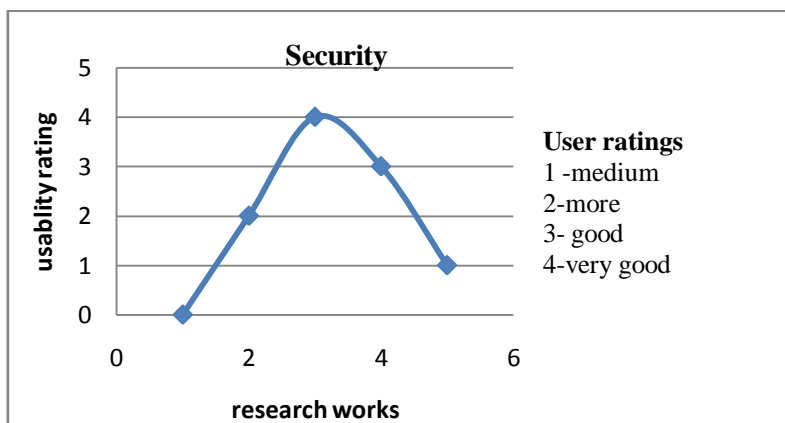
customer password, AES (256 bit) cryptographic technique provides high security then previous method currently in use.

**RESULT AND SOLUTION**

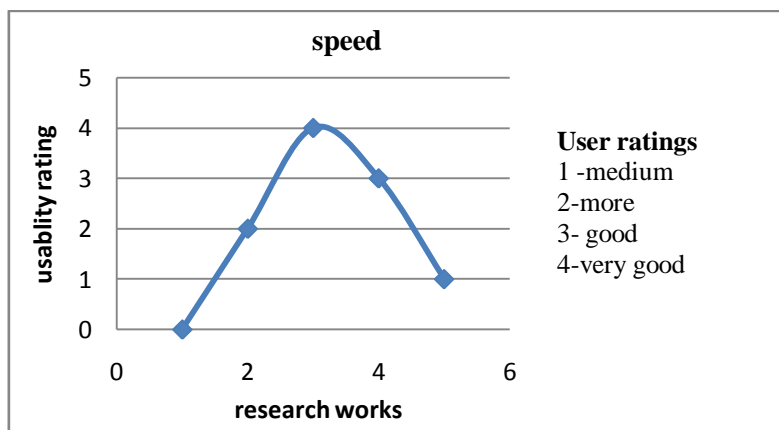
Analyzing the above papers I am find out the solution for securing the ATM by following ways. Here I am providing the two phase security first one is individual biometric identification which is used to detect the customer account detail, then followed by typing the Personal Identification number (PIN) as second phase security to access the Bank account detail. This two condition meet successful ATM system shows the transaction processing page. It also provides additional feature while entered PIN is incorrect Mobile OTP option as help for recovering the loosed password of PIN.

**Table 1: Performance comparison**

parameter	Paper 1	Paper 2	Paper 3	Paper 4
security	1	3	2	4
speed	2	4	3	1
efficiency	1	2	2	1
performance	3	4	1	2



**Fig-1: Security**



**Fig -2: Speed**

## CONCLUSION

This project concludes that the conventional ATM system needs to be replaced with Biometric systems where the Transaction process becomes easier, reliable, secure, and eliminating the need of carrying any kind of swipe cards. Fingerprints are one of many forms of biometrics used to identify individuals and verify their identity [3-5].

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