Iris Recognition Based Smart EDC Machine

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ABSTRACT

Now-a-days, Technology is developed a lot, so many daily basis activities are improved by the use of overgrowth technology. Even the rural area people are also benefited and they are also uses ATM, CREDIT CARD, DEBIT CARD. A portable Electronic Data Capture (EDC) machine is used to enable debit and credit cards payments from anywhere by the users at anytime. It can digitalize the transaction process without the exchange of cash. An "IRIS RECOGNITION SMART EDC MACHINE" can be used to improve the level of security of the transaction than in the existing EDC. The usage of the EYE SMART EDC MACHINE is that it uses a DIGITAL CAMERA for recognizing eye sight as a password to recover the details of the customer.

INTRODUCTION

In our day-to-day life we are facing a lot of problems to earn money. The money can be saved in one way by using banks, which can be withdrawn, credited or transacted to other accounts from any place at anytime due to introduction of AUTOMATIC TELLER MACHINES (ATM). ATM is a 24 hour service which is working well but the major drawback is that it doesn't exist in few remote villages. To overcome this a simple, portable, light weight ELECTRONIC DATA CAPTURE (EDC)machine was introduced by the banks on which seller can use swipe cards to obtain payments. Using the Infrared Rays (IR rays) the pin code or the password entered by the user can be hacked effortlessly by the thermal conductivity. A "IRIS RECOGNITION BASED SMART EDC MACHINE" uses a iris scan method which is more accurate than the fingerprint scanning .Iris scanning is also a Biometric verification technology used in military ,organisation and in few Android mobiles .It is the most powerful security because each one has a unique iris pattern which cannot be matched with others. The security level becomes high by using this EDC technology.

EXISTING SYSTEM

The Electronic Data Capture (EDC) is also called as the Credit Card or Debit Card Swipe Machine, which can be used in two ways .i.e.,

- Chip based card.
- Card without chip.

The chip based card must be inserted into the machine where we want to choose the online sales option from the various options. It asks for the account number followed by the pin number. Whereas in card without chips is swiped in the EDC machine using the swipe slot present at the right side, the user needs to enter the account number and pin code . Then the customer is allowed to do various operations like credit, withdraw of money, transaction, balance enquiry etc.

By the process of thermal conductivity, the human body has some heat which is transferred and spreads equally on the machine. After the user exit the account, the pin number of the card used by the customer can be hacked easily by passing the IR on the machine and viewing the thumb impression on the hacker's mobile camera. Usually we use a four digit pin code. So, the code which is entered first gets little faded and so on. But it is very easy to find the arrangement of the four digit code by trying the different combinations of it. Thus the account is hacked easily without the knowledge of the user. Finally it produces a bill to merchants with the details of the transaction carried out with the current location, date, and time using GPS .User can also get the bill by selecting the customer copy button. Generally green colour button in the EDC machine is used to select the operations to be performed. Christo Ananth et al. [4] discussed about Positioning Of a Vehicle in a Combined Indoor-Outdoor Scenario, The development in technology has given us all sophistications but equal amounts of threats too. This has brought us an urge to bring a complete security system that monitors an object continuously. Consider a situation where a cargo vehicle carrying valuable material is moving in an area using GPS (an outdoor sensor) we can monitor it but the actual problem arises when its movement involves both indoor (within the industry) and outdoor because GPS has its limitations in indoor environment.

PROPOSED SYSTEM

The user uses the thumb for entering the pin. Due to thermal conductivity the heat which is liberated from the human body spreads equally on the EDC machine. After the user exists the code can be traced by using the IR rays. So, to overcome this problem the proposed system "EYE RECOGNITION BASED SMART EDC MACHINE" (EDC) can be used. Each one of us have a unique iris. The pupil and limbus of the iris are detected initially. As we have already provided the iris recognition to the Aadhar which is an id verification proof issued by the government. These details can be linked to the bank database. The iris pattern recognized by the EDC should be checked with the bank database details whether it is matched or not. If the pattern is matched, the customer can perform any of the following operation:

- Withdraw
- Credit
- Transaction
- Balance enquiry

- Mini statement

The amount can be specified by the user after selecting the operation. It automatically generates the bill for the merchant, if the user needs the bill it can be generated by selecting the customer copy option. The user can exist if he wishes else he can continue.

ADVANTAGES OF PROPOSED SYSTEM

- ❖ It is more secured when compared to all other types of password security transaction.
- ❖ Joint account users has more advantages.
- ❖ IRIS scan is accurate.
- ❖ Time consumption is very low it takes only 30 seconds.

RESULT AND DISCUSSION

CURRENT EDC MACHINE	PROPOSED EDC MACHINE
1. It use the pin code as password	It uses the retina eye recognition as password
2. It is less secured that is hacking may occur.	It is more secured. No chance of hacking.
3. Takes less time but less accurate.	Takes very less time but highly accurate.

Fig:1 Comparison between current and proposed EDC machine
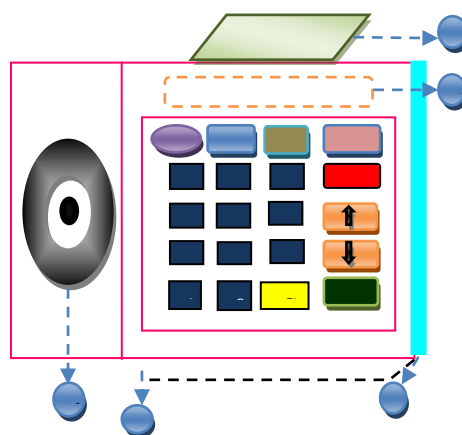
SYSTEM ARCHITECTURE

Fig:2 Systematic representation of Smart EDC machine

1. IRIS RECOGNITION
2. TRANSACTION BILL
3. DIGITAL DISPLAY OF TRANSACTION
4. SWIPE CARD
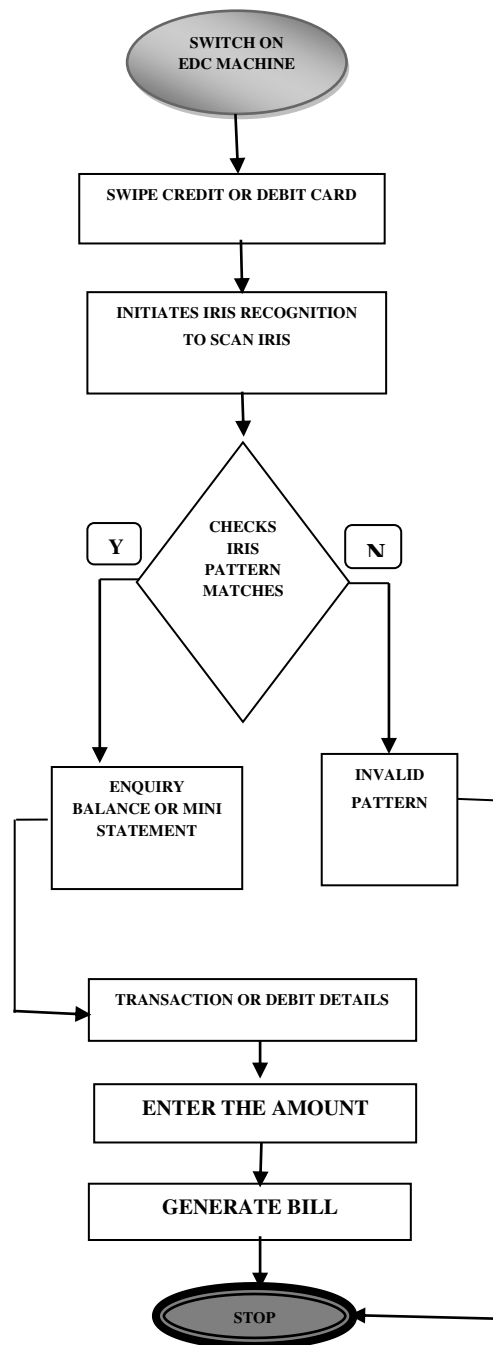5. INSERT CARD

PROJECT MODULE

Fig:3 Working module of Smart EDC

o Initially the user should swipe or insert Credit or Debit card based on the chip in SMART EDC Machine, after recognizing the account number for further precedence it asks for the password.
o The IRIS recognition camera is used to capture the eye (iris) sight of the user which acts as password that links the account with the bank database.
o If it is a valid user i.e., if the iris pattern matches with the already existing pattern, the consumer can perform balance enquiry or mini statement operation efficiently.
  ▪ The system provides the balance details of the card holder by retrieving from the bank information.
  ▪ User can achieve transaction, debit and credit operations as well.
    ✓ Selection of the operation is carried out by selecting it and pressing the "OK "button.
    ✓ As the operation is nominated it asks the user to enter the amount and carries out the necessary work by connecting with the bank.
    ✓ Finally a bill is generated after completing the process successfully.
  ▪ If the user doesn't want to continue further he can exist.
o Otherwise the card is ejected out as it is an invalid user.

REQUIREMENTS

❖ **HARDWARE REQUIRED**
  1. EDC machine
  2. Iris recogniser

❖ **SOFTWARE REQUIRED**
  1. Database
  2. Pattern matching technique.

KEYTERMS

➢ EDC
➢ ATM
➢ GPS

CONCLUSION

Money transaction is going to play a major role in the future. Iris recognition based smart EDC machine is the new proposed system. Used in rural areas as it is portable, simple structured. It can be used efficiently with accuracy because it is more secured without the possibility for the occurrence of hacking. Time efficient when compared to other biometric verification technologies where iris recognition is unique for every user in this atmosphere.

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