

# Automatic Cash Deposite Machine With Currency Detection Using Fluorescent And UV Light

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## Abstract:

Cash Deposit Machines (CDM) has altered the relationship between banks and their depositors, as well as the competitive relationships among banks. In this paper, I survey the literature to describe the ways have influenced these aspects of banking markets. The project is designed to provide fully automatic cash deposit machine. It is combination of Embedded, DIP & Automation. In Mat lab every data image of note is compared with ideal stored image of every appropriate type of note. Every note is passed through UV light to detect the originality of note which consequently results in acceptance and rejection of faulty notes.

**Keywords:** Currency, Fake Detection, Spindle, Storage, UV light.

## 1. Introduction

Automated cash deposit machines can offer significant benefits to both banks and their depositors. The machines can enable depositors to deposit cash at more convenient times and places than during banking hours at branches. At the same time, by automating services that were previously completed manually, CDMs can reduce the costs of servicing some depositor demands. These potential benefits are multiplied when banks share their CDMs, allowing depositors of other banks to access their accounts through a bank's CDM. In this paper, I will review the literature on CDM pricing and focused both on the motives for sharing CDM facilities.

## 2. System Overview

The project is designed to provide fully automatic cash deposit machine. The hardware consists of LCD screen for displaying option to select the bank and enter Acc. No in which cash is to be deposited and also guides the customer to next steps .The carriage is provided to carry the currency notes one by one from customer where camera captures image of every note and send the data image to PC with Matlab. Every data image of note is compared with ideal stored image of every appropriate type of note. Every note is passed through UV light to detect the originality of note which consequently results in acceptance and rejection of faulty notes.



“Figure1. Database contexts”

Spindle is used to push notes from carriage to storage container of notes. Counter is provided to count the cash and counted data will be sending to MC.



“Figure2. System overview”

Finally LCD screen will show the new balance of customers account and will also give printed receipt



“Figure3. Unique receipt”

If there is any fault in machine then buzzer will make sound. Likewise there is one note is duplicate then buzzer will be make a sound. There is LED which indicate that machine is ready to use.

### **2.1. CDM Provide Busy Customer Service**

- [1] Improved levels of convenience and security
- [2] Improved speed of deposit and ease of use
- [3] Reduced queuing time, increased customer satisfaction
- [4] Unique receipt slip issued after each deposit made
- [5] Revenue generating opportunities, created by re-deploying staff to more profitable activities
- [6] Flexibility to process cash at a convenient time or to outsource task
- [7] Speed of transaction minimizes customer exposure to risk of attack
- [8] Enhanced management information

### **2.2. Customer Requirement**

Banks customers' taste and desire have begun to raise the stakes of expectation of exceptional services. Customers want to transact their banking transactions at any time and location convenient for their life-style. They want to pay their regular household bills. The four forces - customers, technology, convergence and globalisation have the most important effect. The success of electronic banking, as argued by many researchers, depends probably on bank service quality, customer preferences and satisfaction. Recent studies found that consumer behaviour is changing partly because of more spare time. The way of use of financial services is characterised by individuality, mobility, independence of place and time, and flexibility. Historically, banks have taken the attitude that they will provide customers with the services and, the banks, wish to provide. In order to survive both from domestic and the increasing level of global cross-border competition, banks need to change their process of servicing their customers

### **2.3. Benefit of automatic Banking**

The perceived benefits of electronic banking have been documented in recent studies, especially several electronic distribution channels available for banks in United States and concluded that customer orientations towards convenience, service, technology, change, knowledge about computing and the Internet affected the usage of different channels. Convenience of conducting banking outside the branch official opening hours has been found significant in cases of adoption. Banks provide customers convenient, inexpensive access to the bank 24 hours a day and seven days a week. Literatures indicate the movement away from cash transactions and in words of the use of non-cash payment has continued to rise with increasing value. Tellers are today equipped to issue receipts (deposit slips) for cash deposits the service of ordering bank draft of certified cheques made payable to third parties has also been increasingly automated .A reduction in the percentage of customers visiting banks with an increase in alternative channels of distribution will also minimize the queues in the branches. Increased availability and accessibility of more self-service distribution channels helps bank administration in reducing the expensive branch network and its associate staff overheads. Bank employees and office space that are released in this way may be used for some other profitable ventures

#### **2.4. Customer always require fast technology**

New technology has raised your customers' expectations, and whilst they may come from many different backgrounds, lifestyles and professions, your customers have one thing in common: Choice of leisure time, work patterns, shopping, and the choice of how, when and with whom they carry out their banking requirements. In this competitive environment the winners are responding to their customer's needs, and improving the banking experience with

- [1] A convenient customer service
- [2] A modern retail environment
- [3] Faster transactions and improved security
- [4] Extended hours access to services

Communications – complete with a monitoring system to constantly verify operation and status of the CDM, whether remotely or centrally located. A file transfer utility is also available for retrieving audit and event history files. Automated Cash Deposits help you deliver more efficient Self-Service solutions. Our range of Cash Deposit Machines has been designed either for free standing or in the wall installation

#### **2.5. Risks Associated with Electronic Banking**

Although, electronic banking provides many opportunities for the banks, it is also the case that the current banking services provided through Internet are limited due to security concerns, complexity and technological problems. Hewer and Howcroft used the term trust to describe a measure of risk. Viewed risk in the context of security concerns and risk in the context of trust in one's bank. Finally, a number of studies found trust and perceived risks have a significant positive influence on commitment and ultimately leads towards overall satisfaction. Reputation of a service provider is another important factor affecting trust

### **3. Application**

- [1] Banks and other financial institutions: Personal and business customers making cash/cheque deposit.
- [2] Local Government Offices: Payment of rents, taxes, court fines, parking fines.
- [3] Utility company Offices:  
Payment of water, gas, electricity, telephone bills.
- [4] Transport: Airline cabin crew, bus or train drivers and conductors who need to deposit fares or payments received.
- [5] Retail Outlets :Convenient cash deposit system for daily takings and offers customers a paying in point for store cards

### **4. Conclusion**

With incorporation of cash deposit machine we will be able to solve the problems like fake note detection. Main purpose of cash deposit machine is to provide flexibility depositing money 24x7 in particular bank account so that we could get lead from queuing in front of bank window and inconvenience in time availability. Reduction in queuing time increases customer satisfaction. It also improves speed of deposit and level of convenience with security.

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