

NAE-Vote Casting with Security Features

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ABSTRACT

The New Age electronic Voting (NAE-Voting) system can be a voting system throughout that the digital info to be used in election is recorded, kept and processed primarily. There are two kinds of NAE-voting: On-Line and Offline. On-line, i.e. use modulated network affiliation, and offline, by using a NAE-voting module freelance. Fingerprint devices, Barcode Readers (for "UID Cards") for ballot machines and totally different existing identity documents are mentioned and enforced throughout this project. Authentication of Voters, Security of ballot method, Securing voted data and "booth capture" immune polling system are the most challenge of e-voting. The project demands the user to submit his Finger print at the kiosk. The project supported the Finger print technology and Embedded Systems to style this application. The most objective of this project is to style a system that may scan the users Finger print as associate identity proof. The system browse the information from the Finger print and check this information with the already hold on data in its information. If input data gift within the knowledge base it matches with the hold on knowledge, the system permits the person to enter into and poll his vote. If input data of the Finger don't match with the hold on knowledge, the system directly activates the show and also the security authorities will be called and take the any action. This project may be a device that collects knowledge from the tag and codes the information into a format that may be understood by the dominant section.

The objective of the project is to develop a microcontroller primarily based security and alert system. It consists of a Finger print reader, microcontroller, the interfacing unit to permit the communication between the microcontroller and Finger print module, and also the LCD. Administration unit in a timely manner using GSM System with cryptography technique.

Keyword : - GSM, UID, NAE-Voting.

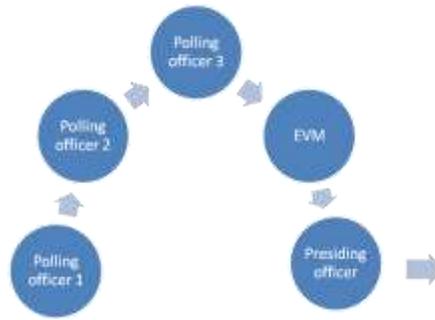
1. INTRODUCTION

The hot discussion at the top of each election is that the allegations created by losing parties on the idea of counterfeit ballot. it's true to some extent as ruling parties at the time of election misuse their power to secure power. additionally it denies the individuals of their basic right to pick out a frontrunner of their selection. therefore so as to shield the rights of the citizen, a fool proof mechanism of ballot is required. Our project aims to meet this demand by adding finger print verification And barcode reader to the EVMs. We tend to selected this technology. Government of Maharashtra(INDIA) is functioning on a project named "EPIC" to attach adhar Card (UID) info to Election ID card info.

Since, finger prints area unit a novel gift of nature that differs from each single individual and UID Cards are equipped with barcode .we are using two stage verification.

2. OVERVIEW OF PRESENT WORK

2.1 Present System Geography



The user has to show his voter ID card whenever he goes to the polling booth to poll his vote. This is a time consuming process as the person has to check the voter ID card with the list he has. After That confirm it as an authorized card and then allow the person to poll his vote. As above we can see that three polling officers and a presiding officer together operate a Polling booth. Polling Officer 1 Check the voter ID card for authorized voter. Polling Officer 2 Make ink mark on forefinger. Polling Officer 3 Issue A ballot on EVM. And Presiding Officer Supervise all procedures and regulate the event smoothly.

2.2 Scope on Present System

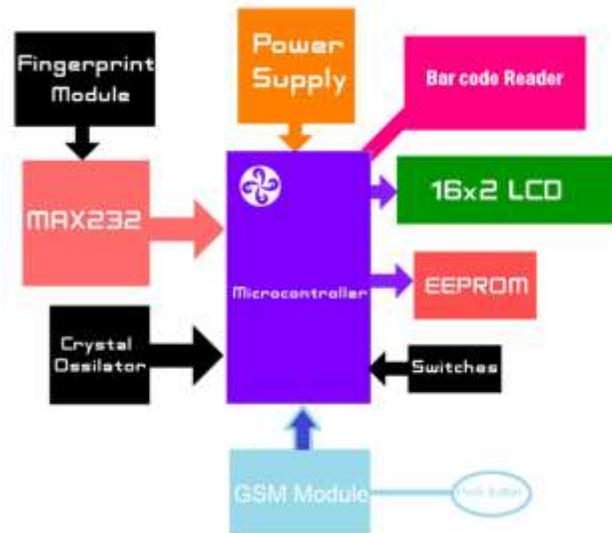
To avoid this time taking event, we have designed a finger print based voting machine where the person no need to carry his ID which contains his entire details.

“EPIC” is a Project governed by Government of State (Maharashtra), where Election ID card Data is merged with Adhaar (UID) Card. All this is because we can use Adhaar (UID) Card database as biometric data during Elections. The person at the polling booth has to show his UID (Unique Identity) and then a Finger. This Finger print reader reads the details from the tag. This data is passed to the controlling unit for the verification. The controller reads the data from the reader and compares this data with the already existing data. If the data matches with the already stored information, the person is allowed to poll his vote. If not, a message is displayed on LCD and the person is not allowed to poll his vote. The polling mechanism carries out manually using the switches. LCD is used to display the related messages.

2.3 Hardware Requirement

- C.1) Microcontroller
- C.2) MAX 232 TTL Generator
- C.3) GSM Module
- C.4) Fingerprint MODULE
- C.5) Barcode Reader(Serial Communication)
- C.6) Other Components

2.4 Proposed Block Representation



3. CONCEPT

3.1 Study Of Procedures of EVM primarily based Elections

Firstly the study of On going EVM primarily based elections is one amongst necessary step toward the experimental style. By Study the operating of the election commission of Republic of India (ECI) ,a Government enterprise Organization.

3.2 Embedded Systems

An embedded system is outlined as a computing machine that will a particular centered job. Appliances like the air-conditioner, VCD player, DVD player, printer, fax machine, movable etc. are samples of embedded systems. every of those appliances can have a processor and special hardware to satisfy the particular demand of the applying in conjunction with the embedded software system that's dead by the processor for meeting that specific demand.

The embedded software system is additionally known as “firm ware”. The desktop/laptop pc could be a general purpose pc. you'll be able to use it for a range of applications like taking part in games, data processing, accounting, software system development and shortly.

In distinction, the software system within the embedded systems is usually fastened listed below:

Embedded systems do a really specific task, they can't be programmed to try to to various things. Embedded systems have terribly restricted resources, significantly the memory. Generally, they are doing not have external storage devices like the CDROM or the magnetic disc. Embedded systems ought to work against some deadlines. a particular job has got to be completed among a particular time. In some embedded systems, known as period systems, the deadlines are demanding. Missing a point might cause a catastrophe-loss of life or harm to property. Embedded systems area unit affected for power. As several embedded systems operate through battery, the facility consumption has got to be terribly low. Some embedded systems ought to operate in extreme environmental conditions like terribly high temperatures and wetness.

3.3 Following area unit the benefits of Embedded Systems

1. They're designed to try to to a particular task and have real time performance constraints that should be met.
2. They permit the system hardware to be simplified thus prices area unit reduced.
3. They're sometimes within the sort of tiny processed elements in larger devices that serve a general purpose.
4. The program directions for embedded systems run with restricted element resources, very little memory and little or maybe non-existent keyboard or screen.

3.4 Benefits within the projected System

- Reduced Man power as compared to standard EVM based mostly Elections.
- Enhanced and correct Authentication of elector because of Involvement of identity verification System.
- Enhanced security measures because of use of GSM Module and Alarm alert system.
- Time to time upgradable system
- Low power consumptions.
- High accuracy as compared to humans.

4. CONCLUSIONS

The proposed voting system benefits in user authentication method through fingerprints, the polling process is made easy with the use of the QR codes and Fingerprints. The main benefit is time consuming comparatively less than the older voting system. The system can be implemented easily in any areas where voting needs to be done.

The future enhancement is to analyze the compatible support over the various distances in wide area manner. The implementation can be simple and is made. effectively with the accuracy. This system can also be used in any organization or even an association which conducts the voting to select their respective presidents. In those areas, all the members can be given only with the QR codes that were made in the private manner specially to use inside the organizations. The use of QR code is itself a secure one where the biometrics can stay Parallel as a additional security feature in the system.

INPUT A	INPUT B	RESULT
User 1	User 1	True
User 2	User 1	False
User 2	User 2	True

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