# CONCEPTS OF VOTING SYSTEM

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**Abstract -** *Voting is the process found throughout the world. Vote means finding from the list. Many of the issues regarding to the voting. Some of them are security, privacy and lack of Time. E-voting is introduced a novel secure ,privacy preserving and cost effective election polling concept which uses internet connectivity, block chain storage and homomorphic encryption.*

*Key Words***: E-voting, Homomorphic encryption**

## 1. INTRODUCTION

Later, we used paper ballot and manual counting. The paper ballot method was widely criticized because of fraudulent voting and booth capturing, where party locality prefilled fake ballots. In the e-voting is a simple, safe and secure method that takes minimum of time. He/she can vote without their physical presence and also the figure print verification is used to the voting. It is one of the greatest advantages of NRI and person who go outside the country they can vote by using their Smartphone. [1]

## 2. SCOPE OF STUDY

It is centered on finding out the present system of voting in Republic of India and to create positive that the peoples vote is counts, for fairness within the elective positions. This is also can produce:

- Less effort and fewer labor intensive, because the primary cost and focus primary on making, managing, and running a secure internet option portal.

- Increasing variety of voters as people can find it easier and a lot of convenient to vote, especially those abroad.

## 3. LITERATURE REVIEW

Paper based voting- The voters get a blank ballot and use a pen or a marker to indicate he want to vote for which candidate. It is a time and labor consuming process and also it is easy to manufacturing paper ballots and the ballot can be retained for verifying. The training will be wanted to the staff members. The staff members in charge required to present prior to check the arrangement in the polling booth. The counting will be done by other officer. [2]

Lever voting machine- lever is assigned to corresponding candidates. The voters will pull the lever to poll their candidates. It is not a user friendly process and more time is used for it.

Direct recording electronic voting machine- it will be used to touch screen or button to poll. The vote counting is faster and the vote will stored in the software.　Here is used a removable memory disk, so after counting the votes data will be removed. It does not have any accuracy.

Punch card- it is a punch type voting. When the voters vote is incomplete, it will be determined as wrongfully. The number of the opening is that the only information printed on the cardboard. The list of candidates or ballot issue choices and directions for punching the corresponding holes are printed during a separate booklet. With the info vote card, the name of the candidate or description of the selection is printed on the ballot next to the situation of the opening to be punched.

Optical voting machine-The voters will fill a circle correspond to their favorite candidates. Then compute total vote. Each voter fills a circle associated with their favorite candidate on the blank ballot, this machine selects the darkest mark on each ballot for the vote then computes the entire result. This type of machine counts up ballots rapidly. However, if the voter fills over the circle, it'll cause the error results of optical-scan. A plus of those systems is that the voters don't got to determine to use a robot. Mentally fit voters can simply use pen and paper to mark their intent. Some disabled voters could use a machine to print a voted ballot, which may then be fed into the optical scanner in conjunction with all the opposite ballots, thus preserving the secrecy of their ballot. Optical scan voting systems can allow for manual recounting of ballots. Statistically relevant recounting can function a tool to detect ordered malfunction or fraud. Once a mistake within the counting process is suspected a full recount can determine the right results. a plus compared to DRE voting machines is that albeit the optical scanner breakdown, voters can still fill out their paper ballot, and leave  it to be scanned when the machine is fixed or restored with a spare. This also allow more people to concurrently vote than would be the case with fully computerized voting.

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## 4. SYSTEM SPECIFICATION

### 4.1 Proposed system

### E-Voting using block chain and fingerprint

The use of Block chain to facilitate e-voting applications with the power to assure elector namelessness, vote integrity and end-to verification. we have a tendency to believe e-voting will leverage from basic Block chain options like validation structure among transactions (through hashes) and public accessibility of distributed records.[3] The Block chain technology will play key role within the domain of electronic option due namelessness, maintaining distributed and publically distributed records of transactions across all the nodes. This makes Block chain technology terribly economical to handle the threat of utilizing a option token quite once and therefore the decide to influence the transparency of the result. For verification the person's Fingerprint are going to be scanned at the client-side and matched matched at the servers with the info extracted from the native information. We have a tendency to use Fingerprints for authentication as a result of it's quicker and higher than alternative biometric knowledge. Furthermore by victimization Fingerprints it's ensured such pretend entries square measure blocked.

### 4.2 Process steps

Step 1: During verification and Fingerprint are collected and updated to block chai during member registration feature: Voters details, mobile number

Step 2: The election Admin set the booth manager and candidate details.

Step 3: Verification of voters in before election, OTP verification my mobile application

Step 4: After OTP verification, Finger verification is done by accessing block chain

Step5: vote page will open, member can now poll vote

Step 6: After a vote is polled the data is stored in Block chain database.

Step 7: System identifies how many votes are polled in Booth.

Step 8: Then the election is completed. The election result is displayed in application.

### 4.3 Block chain concept

A block chain, originally block chain, could be a growing list of records, known as blocks that are joined exploitation cryptography. Every block contains a crypto logic hash of the previous block, a timestamp, and dealings information (generally drawn as a merkle tree root hash).

Block chain Structure A Block chain could be a redistributed, distributed and public digital ledger that's wont to record transactions across several computers so the record cannot be altered retroactively while not the alteration of all resulting blocks and also the accord of the network. This enables the participants to verify and audit transactions in expensively. A Block chain information is managed autonomously employing a peer- topper network and a distributed time stamping server

We'll be storing information in our block chain in a very format that's wide used: JSON. Here's what a post keep in block chain can look like:

```
{

  "author": "some_author_name",

  "content": "Some thoughts that author wants to share",

  "timestamp": "The time at which the content was created"

}
```

### 4.4 HSA-256 HASHING CONCEPT

SHA-256 could be a member of the SHA-2 cryptographical hash functions designed by the NSA. SHA stands for Secure Hash algorithmic rule. cryptographical hash functions ar mathematical operations run on digital data; by examination the computed "hash" (the output from execution of the algorithm) to a legendary and expected hash worth, an individual will verify the data's integrity. A unidirectional hash may be generated from any piece of information, however the information can't be generated from the hash.

### 4.5 FINGURE PRINT AUTHENTICATION

Finger print is employed to unambiguously determine the user. The finger print trivia options are completely different for every person. Finger print is employed as a authentication of the voters. Elector will vote the candidate just the once, the system won't enable the candidate to vote for the second time. The system can enable admin to feature the candidate name and candidate photograph World Health Organization are appointive for the election. Admin solely has the correct to feature candidate name and photograph World Health Organization are appointive. Admin can register the electors name by corroboratory voter. Admin can certify the user by corroboratory the user's identity proof and so admin can register the elector. The quantity of candidate additional to the system by the admin are going to be mechanically deleted when the completion of the election. Admin has got to add the date once the election aiming to finish. Once the user has the user id and watchword from the admin the user will login and vote for the candidate World Health Organization ar appointive. The system can enable the user to vote for under one candidate. The system can enable the user to vote for just one occasion for a specific election. Admin will add any range of candidates once the new

elections are going to be proclaimed. Admin will read the election result by victimisation the election id. Even user will read the election result.

## 5. CONCLUSION

The main objective of the system is to overcome the limitations of the existing system. In proposed system, Fingerprint is used for validation to identify fake voters with their id by comparing with the Fingerprint and Fingerprint in database. This system is used by Election Officer and Booth Manager for checking the voters those who are process of polling. This system promotes many votes and the votes are transferred correctly, securely, permanently

## BIOGRAPHIES

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and transparently.

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