AN INNOVATIVE APPROACH OF IMPLEMENTING VOTING MODEL IN AUTOMATED TELLER MACHINE

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Abstract: Election plays an important role in a democratic country like India. Election process generally requires large number of human resource; ample money needs to be spent by the government and a lot of hard works by many people are required for a fair election process. This is an innovative approach where the people can be allowed to cast their vote in the automated teller machines. This model can be expected to overcome the drawbacks of the current system because of which the percentage of votes registered never reaches 100%. With the help of this model we can expect increase in people's participation in the election process.

Key words: *e-voting, authentication, Automated Teller Machine*

INTRODUCTION:

Election is a process where in the people will choose their representatives. In a democratic government of the people, by the people, for the people every citizen is provided with right to vote. It is the responsibility of the government to ease out the process of election so that every individual shows interest to cast his/her vote. It must also be a fair process and the people must have confidence in them.

EXISTING SYSTEM:

In India, the current election process makes use of an electronic voting machine. The machine consists of two units: control unit and balloting unit. A 5-meter long cable will join them both. An officer of in charge will have access over the controlling unit where as the balloting unit will be placed inside the compartment. It is where people will cast their vote.[2]

LIMITATIONS OF EXISTING SYSTEM:

In case if any upgrades are needed to be made in the electronic voting machine for ex, if we need to increase the capacity of the machine to store more number of votes we need to replace all the existing machines with the newly upgraded machines. It will require huge amount of money. The polling machines have to be distributed to various wards through secured transportation, which further increases expenditure. In the existing system there is a provision called the postal voting where in the votes will be sent through post card with their signature. This is totally insecure. Human supervision is necessary to ensure smooth election process.

PROPOSED SYSTEM:

Eligibility, uniqueness, privacy, and robustness are some of the essential features of a fair election process [1]. Here we propose a system, where in software is designed entirely dedicated for this purpose and can be installed in all the automated teller machines. On the day of election alone automated teller machines can be used to allow people to cast their vote.

The algorithm is as follows:

1. Get the details from the user. Store them in database.
2. When the user gives the details, verify with the database.
3. If the data's match, get the fingerprint from the user.
4. Check with the fingerprint database for matching.
5. If the fingerprints match, allow him to cast vote.
6. Store the registered vote in the database.
7. Retrieve the registered votes on the day of counting.

All the registered votes will be stored in the server and they can be retrieved on the day of counting. This model guarantees that all the registered votes will be included for counting. In the case of existing system, it will take at least a day to count the votes registered. We also need to check the final tally. In this method immediately after the process ends within half an hour we can get the results. We can also make sure that any one does not falsify the end result.

We can be sure that impersonification is prevented. The voter has to come definitely to the center in order to verify his/her fingerprint for the authentication purpose. Hence no person can register vote for another person. Vote buying or bogus votes are not possible.

This is the reason for using biometric authentication because it is distinct for every person. There are various biometric authentication methods available: fingerprint matching, iris matching, DNA matching etc. [6] The main reason for choosing fingerprint matching is that the government is planning to implement fingerprint readers in all the automated teller machines. If this is the case then the cost of installing finger print readers will serve dual purpose. Other biometric authentications can also be used but the implementation cost must be taken care of. Without biometric authentication, allowing a person to cast vote in automated teller machines will not be a meaningful process.

There will be a registration website for the purpose of getting the details of all those who are interested to cast their vote using the automated teller machine before the day of election. It will get details such as the atmcard number with which he wants to cast his vote, pin number, age, state, constituency and ward. The reason to get a single atmcard number is that many people will be having more than one atm card. In order to prevent a person to cast vote using all the atm cards, we will be getting the number of a single card. Only using that card he can register his vote and when he uses other cards it will provide only the banking services options. This is necessary to avoid duplicate votes. In order to ensure eligibility, voter's age is obtained. No one below the age of 18 can cast their vote. State and constituency details are obtained to display the candidates contesting for election from their area. Eligibility of the voter can be checked during the registration period itself. Once they give the necessary credentials the details can be checked against the national database, which will contain all the details including fingerprint (ex: Adhar card). This ensures only eligible voters are allowed to cast their votes. Once the voter has cast his vote, his credentials will be locked or moved to another database so that when he tries to cast vote again it will not allow.

MERITS OF THE PROPOSED SYSTEM:

This model eases out the efforts of the voter required to register his vote. In the existing system people need to travel long distances to come to their own town to cast vote. In the proposed system, people can easily cast their vote in the nearby atm machines. This will increase people's participation in the election process. Also in the existing system, people need to stand and wait in long queues to cast their votes; many of them are not showing interest. So the valuable votes go unregistered. This system will help those people and in turn the percentage of votes registered also increases.

In traditional voting system in order to know the number of votes registered, the collector has to get the data from the pooling booth and finally obtain the total percentage whereas here the votes will be registered in the server then with the single click government can get to know the percentage of votes registered. In order to conduct a secured election, the election commission of India needs to send enough of security guards to every polling booth, in order to ensure that elections run smoothly. In this model the number of securities required will be drastically reduced.

People need not carry voter id with them. Every time on the day of election problems will arise in most of the booths regarding the names of the people being left out in the list who are eligible to cast votes. Manual errors cannot stop people from voting. Vote buying is not possible because the biometric authentication will be distinct for every person and another cannot impersonate it. Because of all these features people will gain confidence in the process of election and will be willing to participate in it. This system is practically possible. It is simple and secure.

CONCLUSION:

Electronic voting can play a vital role in a democratic country. This model will increase people's participation and as a result the percentage of people who cast their vote will increase. This model provides almost all the features necessary for an efficient and fair election process. It is simple and secure and even cost effective. Thus it is practically possible.

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