

**SURVEY ON SMART VOTING SYSTEM**¹R.Sabitha, ²A.Sandhya, ³Mrs.L.Sudha, ⁴Mrs.K.B.Aruna¹UG Student, Department of CSE, S.A.Engineering College, Chennai²UG Student, Department of CSE, S.A.Engineering College, Chennai^{3,4}Assistant Professor, Department of CSE, S.A.Engineering College, Chennai

Abstract- Electronic voting is also called as an E-voting. E-voting or online voting systems are becoming popular with the widespread of computers. It is an emerging technique in online networks. It is based on application, this voting application uses bio- metric scanner and OTP (one time password) numbers for identifying the person. Vote casting (an extra vote given by a chairperson to decide an issue when the votes on each side are equal) cannot be altered for an unauthorized person. The additional feature of the model is that the voter can confirm if his/her vote has gone to correct party. In this model a person can also vote from outside of his/her allotted constituency or from preferred location. In our experiments, we provide high security to each and every vote. Also the voted data and voters details can be sent to the nearby Database Administration unit in a timely manner using Internet to centralized databases. At last the votes can be counted by using the computer machine. In the proposed system the tallying of the votes will be done automatically. And also internet voting would decrease the cost and increase the speed of election result.

Keywords-AADHAAR number, online election system, online voting system, OTP.

I.INTRODUCTION

India is one of the largest country, which contains millions of people. Many numbers of political parties have been formed in every state, district and town. Elections are importance for any democratic country to select the leader for the country. Democracy is defined as the government of the people, for the people and by the people. In India more number of people are participated in the election based on their qualifications. The elected people rule the country for five years. As a citizen it is our duty to vote. In India Voter ID card is used for an election. A Voter ID card is also called as Electors Photo Identity Card (EPIC) is issued by the Election Commission of India to all the individuals who are all eligible to vote. Eligibility of Voter Id card: Applicants must be in 18 years of age, people who are financially bankrupt are not eligible to apply for the voter card. Voter can track voter's ID card over the internet. The election voter ID card contains name, date of birth and residential address. Currently using election system is not useful for everyone. So we develop new system called online voting system which is useful for everyone. In today's world we do our shopping, banking and manage our relationships on online. But our voting system remains constant. Citizen's need to trudge down to a polling booth, queue up and then select a particular party on voting machine. Then election counsellor's will count the vote frantically and then announce the results to the public. This kind of voting system is not easier for everyone. Nearly half of the voting populations are under the age of 50, and people who are not at their residence will not come to a polling booth. Because of this reason only 70% of the votes will be recorded. Using these kind of situations people will try to do fraudulent. To reduce malpractice in voting system and to increase voting percentage, online voting system is a way that helps public to select their representatives. E-voting system is hard to make the voting system trustworthy only because it has high security requirements: confidentiality and integrity. Confidentiality means all voters get assured about the privacy of their votes and prevent selling of votes. In this paper we propose high security to the online voting system; we use AADHAAR card number which is connected with the user's mobile phone numbers are saved into the database. In this voting system no one can vote more than once. Candidates can be registered easily once they satisfy all the requirements which are specified by the government. Online voting system provides peoples to vote in a secure manner without any fear [3]. Also we provide more time to the user to put vote on online, whenever people feel free they can be vote over the internet. Nowadays mobile phones are familiar for everyone. In this generation, everyone wants to save time in their busy schedule. Nobody is ready to put vote in the polling booth, also they have some physical problems. Online voting system is the right option for today's generation, because it saves cost and reduces time.

Advantages of voting system in India:

- In direct voting popular power is authenticated.
- In election people's voice is heard.
- In election candidates earn trust through votes.
- Election ensures that candidates listen to their constituency and their reasoning in their best political interests.

Disadvantages of voting system in India:

Expensive:

In India, elections are very expensive for a common man. As a result, only people who are rich can participate in the elections.

Misuse of mass media:

During elections the participated parties uses radios and televisions to promote their parties.

Online voting systems also have some issues:

HACKING: The threat to online voting is a prospect of a cyber-attack. If some intruders were able to hacking the systems then they might be able to manipulate the result. This type of threat has grown in recent years. Hackers might not have to access to the voting system, they just launching a Distributed Denial of service (DDoS) attack in which a system is flooded with internet traffic.

FRAUD: In money transactions we can identify the thefts using the record of our past transactions. But in voting system we cannot identify whether the vote is getting modified or deleted by a malicious user. Because users in the voting system are anonymous.

II.SYSTEM OVERVIEW

Security and accuracy are the first and foremost requirements of any voting system [2, 3]:

Uniqueness: In online voting system we collect all biometric data and AADHAAR number, in which no one can vote more than once. Then automatically voter information will be saved into the database.

Privacy: Online voting system provides security and privacy, therefore no one can determine for whom anyone else voted.

Accuracy: We collect AADHAAR number which is connected with mobile phone number. So that no one can change anyone's vote. Every voter who wants to put vote on online can make sure that his/her vote has been taken into an account in the final tabulation.

A.REGISTRATION PROCESS: The user can registered himself as well as candidate. In this module the user should provide the entire details like contact address, phone no etc., for verification. When users AADHAAR CARD ID has been linked with the mobile number means it consist of all the details about the users

B.GENERAL USER: If the user's want to put vote on online voting system, then his/her should enter the AADHAAR card number first into an application after verifying user details an OTP will generate to the user. Using that OTP number a user will be identified.OTP will be generated only if the mobile number is linked with the AADHAAR number. By using the OTP number a user can be identified that the user is belongs to this citizenship or not.

C.ONE TIME PASSWORD

A One Time password or one time pin is used to verify whether the user is right user or not. This password is valid for one time use only. OTP will no longer will be valid. One time password reducing the attacks. One Time password generates based on time synchronization between the server and client.

Various methods of delivering the OTP:

Phones:

A technology used for delivering the OTP is text messaging. Because text messaging is a ubiquitous communication for all mobile devices. Sending text messages consumes low cost and it is easy to implement.

Web based:

When first registering on this application, the user chooses secret things for security.

D. UPDATING VOTER INFORMATION

The AADHAAR Identity number is unique for every Indian citizen. So by using the AADHAAR ID the details of all the citizens have been stored in the database [5]. This identity number has been introduced by the Indian government and it recognizes the constituency of the voter[1][5]. After the verification it generates the OTP number to the mobile phones for the security purpose. This OTP number has to be entered into the application. So that your mobile phone number should be linked with the AADHAAR number [5][7][8].

E. UPDATING CANDIDATE INFORMATION

In election, generally voter id will be verified by field officers (address and identity validation) and after receiving the officer's report only the registration will be validated and then the voter ID card will be issued to the particular person. But in online voting system, the candidate sends all his/her information to the Administrator with AADHAAR number. After verifying all details of the candidate the Administrator will register the candidate according to his/her constituency. At this stage the Administrator also provides a unique ID to each candidate. When the AADHAAR number is matched with the database the one time password (OTP) will generate to make the candidate unique [3]. In this online voting system AADHAAR number is must for every candidate to register.

F. DATE AND TIME OF ELECTION

Time, date and day has to be mentioned earlier for the people so that only people can be aware of election date. After the finalization of the election date should be properly mentioned to the people and the election booth [1][5]. This can be programmed in the stack manner. When the date has been published means people can install this application and start voting. In their preferred location they can vote [5], instead of travelling to the booth. This application can be applicable according to the timings mentioned by the governments.

G. DAY OF ELECTION

On the day of election, the Election Commission arranges the mobile booth in all constituent area [5]. This web server open till the timings mentioned by the government. According to the timings voting can be done. By using the AADHAAR id, the verification will be done and then the voting ballot page will be opened [7] only at that election date and time. Totally no fake voting can be done. For avoiding the fake ones this application has been used. In two segments called identification and verification. Identification is done based on AADHAAR number and the verification is done based on one time password (OTP). The voter has to insert AADHAAR number in the mobile application.

H. VOTE SUBMISSION

The voter first login the respective election account by using AADHAAR ID. It verifies the complete details about his/her identities. It scans the QR code in the AADHAAR card by the scanner. After the verification it takes to the E-BALLOT PAPER. A particular check box has to be selected by the use of party logo. When these process are over click SUBMIT VOTE button for submitting the vote. It is like a client-server system. Where it transmits the data to the server [1].

I.E-BALLOT PAPER

Ballot paper consist of list of members where selected for the government post [5][7]. Each member has a particular logo for their party. The details of their parties are also generated in this application. While voting if a person has any doubt by clicking the name of the parties, they can get details about the parties. People can vote by seeing the logo in the ballot paper. This paper is must in the every booth's as well as in the application. There will be a check box straight towards the logo. By clicking that check box it will be confirmed. Ballot paper can be easily created in the HTML language [7]. At last click submit button for exiting from the application.

Electronic voting machine:

Since 1999, electronic voting machines have been used in India. Which is connected by a electronic ballot paper. Electronic Voting Machine can be opened only with a new ballot number. This machine ensures that one person can get to vote only once. It makes the election system to be simple. EVM saving millions of trees from being cut.

J.ACCEPTENCE OF VOTE BY THE SERVER

The voting systems can protect the vote record (that is, the paper and electronic re-cords) by using digital signatures, which identify the vote and then authenticate the records, and error-correcting codes [8]. When the votes have been saved and transmit to the server means it should not be hacked. The security must be created for securing the details of voters. This is the main part of this application. For the genuine voting this application is used [7]. The OTP (one time password) can also be used [5]. The OTP numbers will be send to your mobile so that the number can be enter where the needs that. In this we can understand that mobile numbers are also be linked with the AADHAAR CARD [5][6]. Digital signatures are mainly used for security purposes [7]. One of the challenges facing an e-Voting system is to insure that no voter can impersonate another voter and no voter can vote more than one time [3].

K. VERIFICATION OF VOTES

Currently, Electronic Voting Machines (EVM) are being used in India. Electronic Voting machines (EVM) have replaced paper ballots in local, state and general elections in India. The voting machines used in India are a combination of two parts. First part is balloting unit on which the voters press the button. The second part is called the control unit which gives the supervising power to the polling officer stationed at the poll booth. The balloting unit and control unit are connected by a cable. Then the voter places his/her vote on the balloting unit which is placed inside the voting compartment. Previously the polling officer used to give paper for election [6]. In online voting system, the authentication process is divided into two segments called identification and verification. Identification is done based on AADHAAR number and the verification is done based on one time password (OTP). The voter has to insert AADHAAR number in the application then it will generate a One Time password for candidate unique. If AADHAAR number is not existed then it will not generate an OTP number.

L. RESULT DECLARATION

In online voting system, results are announced immediately after verification of votes. Once the person selects the particular party, it will be recorded to the database. Result is also posted in the application. And the message will be received in our mobile itself.

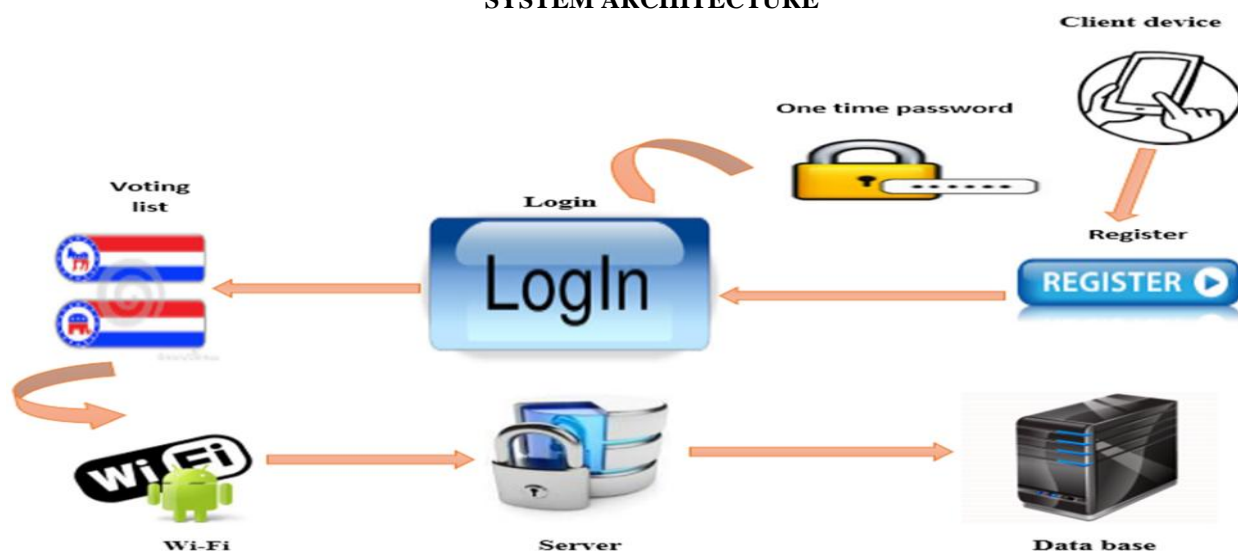
COST EFFECTIVENESS:

For the election, government is spending lots of money. Instead of wasting money in election, this application is very useful for everyone and also we can save lots of money using online voting system [6]. This application gives 30 days of time for voting. Then the result will be announced through the messages. We can save amount while using this application. In this application not much amount will be spent. Only for getting the people details by the government for creating the database, the money will be used.

COMPUTER SYSTEM:

Two kinds of voting have been done here. One is voting through the application and another is voting in the booth. So the votes have to be calculated in the separated way. A person should vote only time. One's he/she voted through application means he/she cannot vote again in the booth. While he entering into the booth his/her id will be checked whether he/she voted or not. These are all has been implemented in the computer system. No extra devices have been used in this system. This application only consists of a mobile phone and computer system. Mobile phones which consist of application for voting and the computer system is used for calculating the vote [1]. No fake vote has been voted here.

SYSTEM ARCHITECTURE



SUMMARY OF THE SURVEY

REF. NO	TITLE OF THE PAPER	METHODS
[1]	Electronic Voting System	The use of technology in election offers. Online voting system reduces the people's burden. It provides prevention of multiple voting and individual verifiability.
[2]	Design of Secured E-Voting System	E-voting systems are becoming popular with widespread use of computer users. It provides uniqueness, privacy and accuracy of the system.
[3]	A Biometric-Secure E-voting for election processes	This system is capable of handling electronic ballots with multiple scopes at the same time. This voting system can tackle all earlier issues encountered in the traditional voting system.
[4]	A secure e-Government's e-Voting System	This main concept of this paper is a reliable cost effective secure electronic voting system. Especially designed to solve cost effective, accuracy and transparency.
[5]	An Efficient and Secure Mobile Phone Voting System	Mobile phone is one of the emerging technologies to perform e-voting. More efficient and reliable and it reduces the cost. It contains three parts: registration, vote collecting and result.
[6]	Electronic voting with bio-metric verification offline and hybrid EVMs solution	This model proposes the electronic voting machine for providing accuracy and transparency.
[7]	Formal specification and Analysis of an E-voting system	The main goal of this paper is that analysing security mechanisms and system requirements.
[8]	Secure Electronic Voting for Mobile Communications	This model proposes voting with low power and low cost. Portable for everyone. It reduces complexity.

III.CONCLUSION

In this paper, we have proposed an online voting system which can solve all earlier issues encountered in current election system. The proposed system is much efficient and secure than the traditional voting system. A unique AADHAAR identity number is the main centre point of our proposed model. With the use of an e-voting system, many of the issues that have traditional challenges traditional voting in the past are bound to be resolved providing peace of mind to both voters and election candidates. It is expected that online voting system will increase the transparency of the existing voting system.

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