# A FINGER PRINT MATCHING METHOD FOR CHECKING AUTHENTICITY IN ONLINE ELECTION SYSTEM

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**Abstract:** There is a necessity to design a secured electronic voting system using multimodal biometrics. In recent years, information technology has greatly affected all aspects of life, and to a largeextent, this includes politics.In order to elect people to various positions different methods have been set up, with researchers continually trying tofind improvement to the existing methods. The most recent method tobe developed is electronic voting (e-voting). It is meant to phase out outdated paper ballot, punched cards andother mechanical voting systems with paperless electronicor online voting systems. E-voting systems endeavour to make elections simple while reducing the total cost of theelection. Designing an air-tight and reliable e-voting system is therefore a great task, in that, the system that must bedeveloped must protect the privacy of the voter, be easily understood and used by the entire voting populace - no matterwho they are or where they come from. A multimodal biometric system (fingerprint and facial recognition) was used inthis paper to improve the security of an E-voting system

***Keywords: Electronic voting systems, Electoral system, Fingerprint***

## I.INTRODUCTION

Internet voting is an appealing concept to most voters, primarily for reasons of Convenience that "why can't an individual vote from their home at a convenient time"), while appealing because of the attractiveness of technology. However, online voting is fundamentally different from other types of online transactions such as banking or shopping. In this paper describe different types of Internet voting, the advantages and disadvantages from a security and privacy perspective, and provide perspective on the history and evolution of the field. Here by using the image matching algorithm and OTP generation makes the election more secure.

## II.EXISTING SYSTEM

These systems included punched card voting, mark sense and later digital pen voting systems. Elections are held by election commission [1] and that were processed either manually or by using electronic devices. Paper-based voting systems originated as a system where votes are cast and counted by hand. With the advent of electronic tabulation came systems where paper cards or sheets could be marked by hand counted electronically. E-Paper-based voting systems [2] originated as a system where votes are cast and counted by hand.

Paper-based Voting Systems (PVS): record, count, and produce a tabulation of the vote count from votes that are cast on paper cards or sheets. Some PVSs may allow voters to make selections by means of electronic input devices. Voter selections are, however, not independently recorded, stored or tabulated by such input devices. Direct-recording Electronic (DRE) [3] voting systems: record votes by means of a ballot display provided with mechanical or electronic optical components which could be activated by the voter. Such systems record voting data and ballot images in computer memory components. Also, data processing is achieved by the use of computer programs. Public network DRE voting systems (PNDRE): [4] Make use of electronic ballots and transmit vote data from the polling stations to other locations over a public network. The votes may be transmitted as individual ballots as they are cast, or periodically as batches of ballots, or as one single batch, at the end of voting. Precinct count voting systems (PCVS): [5] put the ballots in a tabular form at a particular place, say, a polling station. They provide mechanisms that store vote count electronically and transmit the results to a central location over public telecommunication networks. Central

 

count voting systems (CCVS): [6] Tabulate ballots from multiple precincts at a central location. Voted ballots [7] are safely stored temporarily at the polling station. These ballots are then transported or transmitted to a central counting location. CCVSs may, in some cases, produce printed reports on the vote count.

## III.PROBLEMS WITH THE EXISTING VOTER REGISTRATION SYSTEM

The problems of the existing manual system of voting include among others the following:

- Expensive and Time consuming: The process of collecting data and entering this data into the database takes too much time and is expensive to conduct, for example, time and money is spent in printing data capture forms, in preparing registration stations together with human resources, and there after advertising the days set for registration process including sensitizing voters on the need for registration, as well as time spent on entering this data to the database.
- Too much paper work: The process involves too much paper work and paper storage which is difficult as papers become bulky with the population size.
- Errors during data entry: Errors are part of all human beings; it is very unlikely for humans to be 100 percent efficient in data entry.
- Loss of registration forms: Some times, registration forms get lost after being filled in with voters' details, in most cases these are difficult to followup and therefore many remain unregistered even though they are voting age nationals and interested in exercising their right to vote.
- Short time provided to view the voter register: This is a very big problem since not all people have free time during the given short period of time to check and update the voter register.
- Above all, a number of voters end up being locked out from voting.

## IV.METHODOLOGIES

A new methodology is a website that enhances our country with a better voting system to ensure 100% voting .Since the existing voting system is not having high security our project will overcome this major drawback. Our online election system generates the list of all the people in the state above 18 years from the Aadhar card database since it is made mandatory in our country today. From the generated list the website will automatically generates a voter id for people above the age of 18. Hence by this way nobody will be left out without getting their right to vote which fails in the existing system. Therefore 100% voting will be achieved.

During the time of voting, the voter can download the voter id from the net by using the aadhar card number. By using this website he/she can cast his vote to his party at home itself. Even in rural areas where some people are not familiar with android mobiles this is possible. The people in rural areas as usual go the voting booth to cast their vote. But instead of existing voting machine we supply the authority in there with a government authorized mobile with this app installed. So the people in rural areas can also cast their vote with the latest technology and high security than the existing system. The major enhancement feature in our proposed system is the high security level which is not available in the existing systems. The security is maintained by making a voter to cast his vote only once. The second time even if he tries he will not be able to vote. And also when each voter is casting his vote the count will be updated at the same time in the database through the server and will also be displayed for the person casting his vote. Hence by this method it is very difficult to cheat and will also be very much satisfied for the people with the voting system and the winning party.Therefore the website will lead our country to a smart world and will help to evolve into a developed country. Our proposed system will ensure 100% voting in the country with high security voting system as like the developed countries. Finger print matching and OTP generation are the two important algorithms used in here to achieve greater authentication.

## V.FINGER PRINT MATCHING ALGORITHM

From the Aadhar card database the government can access the voter's finger prints and during election the voter is asked to give his finger print using the biometric. If the finger print in the aadhar card database and the voter finger print is matched then the voter gets an OTP to his registered mobile number or to his mail.


**Figure1: Voter Login Page**

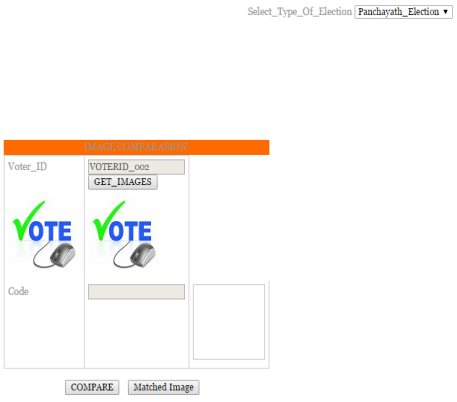


**Figure 2: Finger Print Matching**

### OTP GENERATION ALGORITHM

Once the finger print is matched the voter gets his OTP to the registered mobile number or mail which has the expiry

of 5 mins. This OTP must be entered to access the right to vote online.


**Figure3: OTP Generation**

## VI.RESULT

The interface indicates the display of the political aspirant across different parties. The interfacewill be displayed for the voters so that he/she can select the candidate of her desire for the selected political position.The voter can only select one candidate in this category. Also, there are n number of political parties.

## VII.CONCLUSION

This Online Voting system will manage the Voter's information by which voter can login and use his voting rights. The system will incorporate all features of voting system. It provides the tools for maintaining voter's vote to every party and it count total no. of votes of every party. There is a DATABASE which is maintained by the ELECTION COMMISION OF INDIA in which all the names of voter with complete information is stored. In this user who is above 18 year's register his/her information on the database and when he/she want to vote he/she has to login by his id and password and can vote to any party only single time. Voting detail store in database and the result is displayed by calculation. By online voting system percentage of voting is increases. It decreases the cost and time of voting process. It is very easy to use and It is vary less time consuming. It is very easy to debug. There is a possibility to develop a website that is compatible with the web browsers like chrome, UC Browser, Safari, Mozilla Firefox.

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