Global Journals LaTeX JournalKaleidoscope™
Artificial Intelligence formulated this projection for compatibility purposes from the original article published at Global Journals. However, this technology is currently in beta. *Therefore, kindly ignore odd layouts, missed formulae, text, tables, or figures.*

MyVote -An Effective Online Voting System that can be Trusted

Veerabhadraswamy N

Received: 12 June 2021 Accepted: 5 July 2021 Published: 15 July 2021

Abstract

In a country where leaders are elected by the people, election, and the process of electing play a crucial role. Every citizen of a country has the ?right to vote?. There are different ways of casting a vote and electing an individual. With such a large population, the country needs its own effective and secure voting system. The voting system has made drastic changes from traditional paper ballot voting to current electronic voting and now the online voting system. Advancements in the new system eliminate the drawbacks of the previous system. This paper proposes a new online voting system that provides every individual to cast a vote securely and effectively irrespective of the location.

Index terms— booth officer, EVM, EPIC.

1 Introduction

he election, or the voting should be simple, secure, and robust so that any individual can easily enjoy the freedom of voting. The system should be transparent and intelligible so that voters and candidates can accept the results of the election. Manual intervention should be avoided, which leads to manipulation of the system and electing a wrong leader. A secure voting system should have the following criteria: Authenticity: Our proposed system concentrates on authenticity of a voter by checking with the EPIC number, name, and phone number of an individual. If any one of these information is correct, then the voter is identified as an authenticated person and is allowed to vote. Since voting is the secret process, voters should be the highest priority to make the voting process fair. Security: Security is the primary factor in any online system. Security should prevent the duplication of votes. Un-authenticated person should be filtered in the early stages itself. In the proposed system, the booth officer is responsible for providing security by eliminating duplicate, fake voters.

2 Usability:

The election/voting should be simple, easy, and understandable by every individual regardless of age, disability. Our system is usable and friendly since all the verification and validation are carried out by the booth officer, and the voter can simply cast a vote.

3 Time and cost:

The voting process should be simple and easy. It should not be tedious and cumbersome. The voter should enjoy the election. Our system is less time consuming, since all the information is already in the database and only verification is carried out at the time of voting. It reduces time.

4 II.

5 Existing System

The voting is the right of every citizen. Vote confirms our right as citizens to elect the leaders of the government. The voting is the most effective way to express the right of every individual. The voting system records the votes of the people, and the results should be accurate and unbiased.

6 a) Paper Ballot Voting System

The paper ballot system is the initial and traditional system of voting. In this system, the votes were cast by means of the papers in which the voter used to vote by marking the ballot paper with a rubber stamp, the voter then folds the ballot paper and put it in the ballot box, which is kept safe in the eye of allotted officers. Eliminates duplicate votes: Since each voter is given only one chance to vote, this eliminates duplicate votes. Less costly: The system is very much affordable than the electronic system as the major requirements are only paper and the ballot box.

7 No fear of technological errors:

The paper ballot voting included no electronic device. Hence there is no fear of hacking, fraud, replacement of parts, and errors in the election process.

ii. Disadvantages of The Paper Ballot Voting System Time Consuming: As only one person can vote at a time, it is very time consuming, and a slow process.

8 Results of the voting are delayed:

The results of election cannot be declared immediately since all the ballot boxes should be collected at one specific location, and then the counting should start.

9 b) Electronic Voting Machine (EVM)

Instead of ballot boxes, electronic voting machines were introduced. This machine has a control unit and a ballot unit. The ballot unit has 16 candidate buttons, and if any of them is unused, they are covered with a plastic masking tab inside the unit. An EVM can record a maximum of 3840 votes. It is not possible to vote more than once by pressing the button again and again. As soon as a particular button is pressed, the vote is recorded for that particular candidate and the machine gets locked. As soon as the last voter has voted, the polling officer will press the close button. Ater that EVM will not accept any votes.

i. Disadvantages of Electronic Voting System EVMs Systems Lack Transparency: A voter cannot observe the process inside the machine and must blindly trust that the votes are registered.

Vulnerability to Fraud: If people have knowledge and access to machines, one can take out the memory card that stores the votes and can replace it with another card, which can affect a huge number of votes.

Power: An electronic machine mainly works on battery power. In remote places where electricity is the major issue, EVM fails to operate and the entire process is disturbed.

Cost: The cost of the system is a major concern. It consists of a unit which is expensive, and also if damaged, the cost of repair is more and irrecoverable.

10 III. Proposed Online Voting System

MyVote is an online voting system, which is a simple, understandable and secure way to cast a vote. In the proposed system, the voter simply has to cast a vote by pressing a vote button. All the votes will be stored in a database. Before the election, all the details of voters are available in a database. In order to vote, the voter should be registered first. On the Election Day, the booth officer will validate the voter either by the EPIC, name or phone number. If the voter has the EPIC, it gives us the details of the voter. If the voter provides any other id proof such as Adhar, then the voter is verified by name, and other details such as district, constituency, and so on. Once the details are entered, we can retrieve the details of the voter, which can be verified against the id proof of the voter. The main objective of the proposed system is identifying properties that a secure and trusted online voting system must satisfy to eliminate duplication.

11 a) Step 1: The Voter Verification and Validation

For the proposed system, the voter has to first register as a voter either online or by filling the application form. Once he is registered as a voter, all the details will be stored in a database. At the time of election, the booth officer will verify the id and cross check the voter's details. The verification can be done by entering voter's EPIC, name or phone number by the booth officer. The information retrieved after entering voters' information will be validated by the booth officer.

Only registered and valid voters are allowed to vote. There is no need for physical identity, provided the name of the voter should be in a voters list. In this step, the actual voting takes place where the voters cast their votes. Once the details are verified against the proof provided by the voter, the booth officer can submit the "display terminal for voting" button. Finally the voter is displayed with a terminal which consists of candidate names and the voter can now cast a vote. The vote is successfully accepted and is saved in a vote database which is further used for counting and statistics. Cost: Physical transportation of the voting machines from one place to another can be eliminated, which in turn eliminates the cost of transportation. The cost involved in training people every time, before the election process can also be reduced. Also the cost spent on the EVMs can be nullified.

12 Results are not delayed:

As the data resides on the central database, the results of the voting can be announced without any delay.

IV.

13 Conclusion

In a country where democracy is by the people, every individual vote is to be considered valuable. Due to various reasons in the manual and electronic voting system, the valuable votes cannot be effectively discharged. This paper therefore introduces an online voting system, which enables the voter to cast his/her vote in a trusted environment. Also since the validation and the verification is done by the booth officer at the time of election, fake or proxy voting can be eliminated. The setup cost for setting up the central server for this system is considered to be huge, but later only involves system is considered to be huge, but later only involves the maintenance cost. Also the voters need to be educated on the system before voting. The proposed system can be considered as replacement to EVMs, the major change involves replacement of the EVMs with the computers. Since the EVMs are costlier one can reduce the cost spent on the machines.

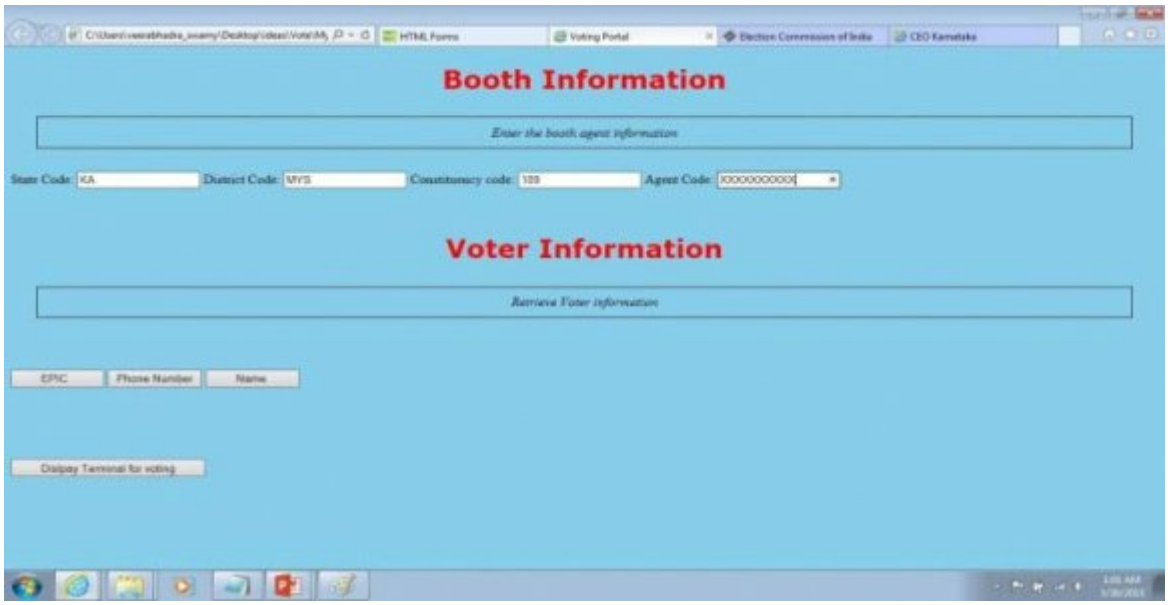
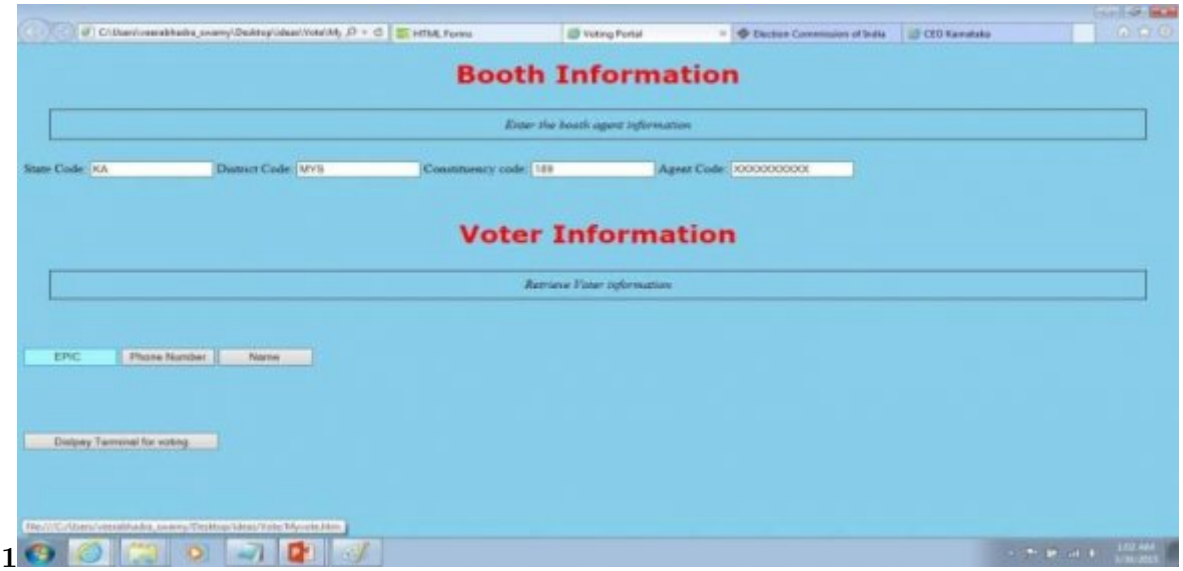


Figure 1: T

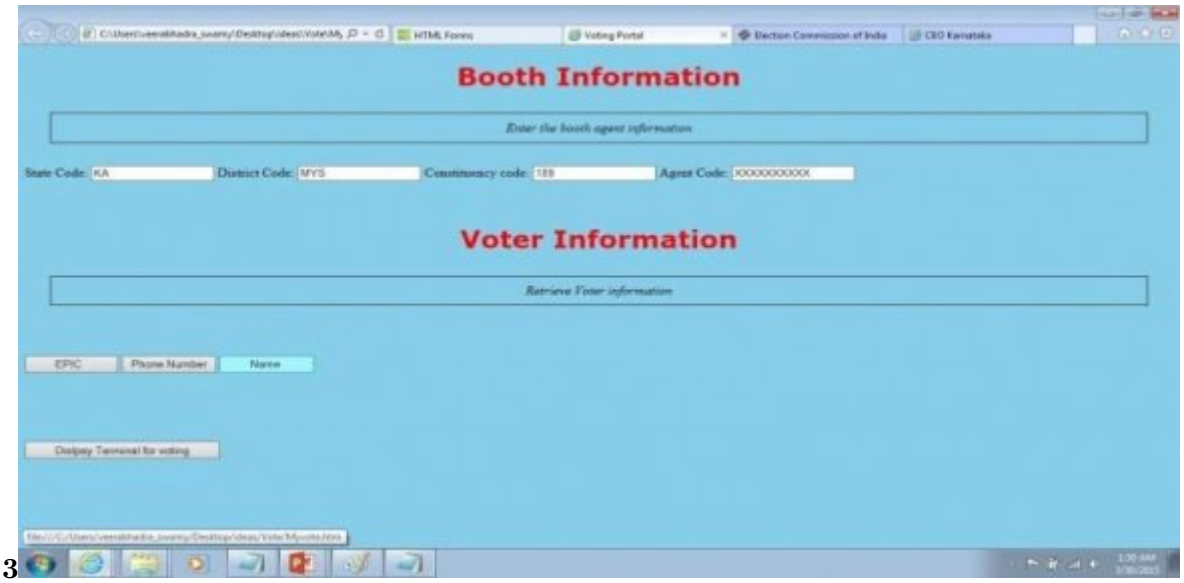


1

Figure 2: Figure 1 :

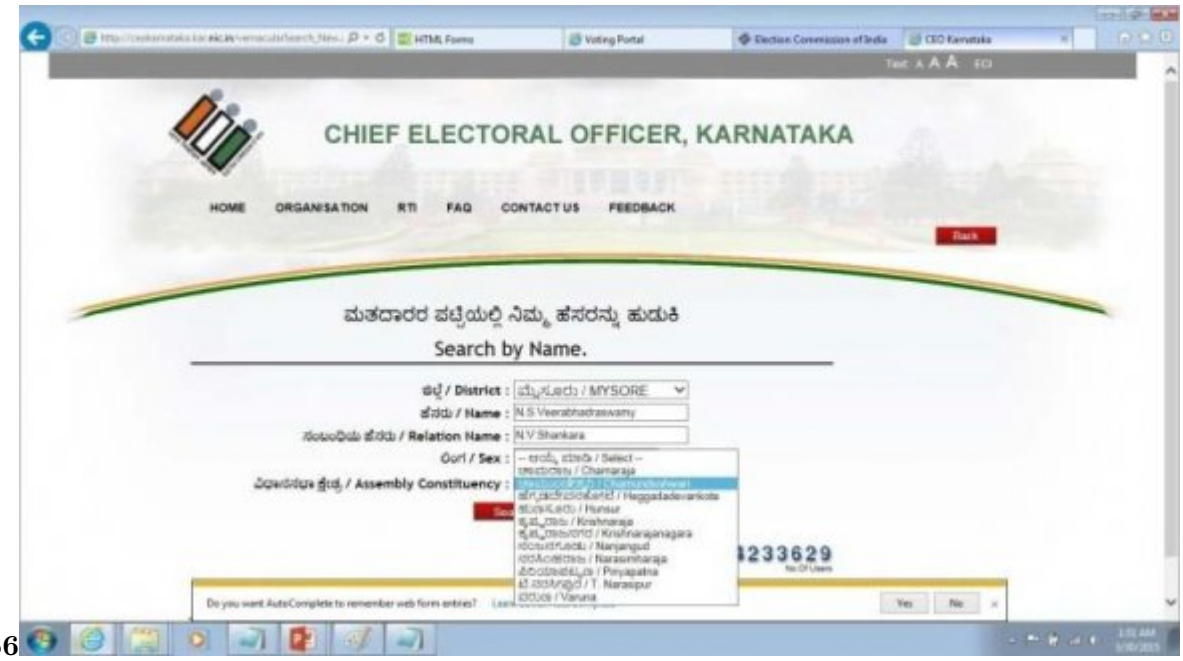
2

Figure 3: Figure 2 :



3

Figure 4: Figure 3 :



456

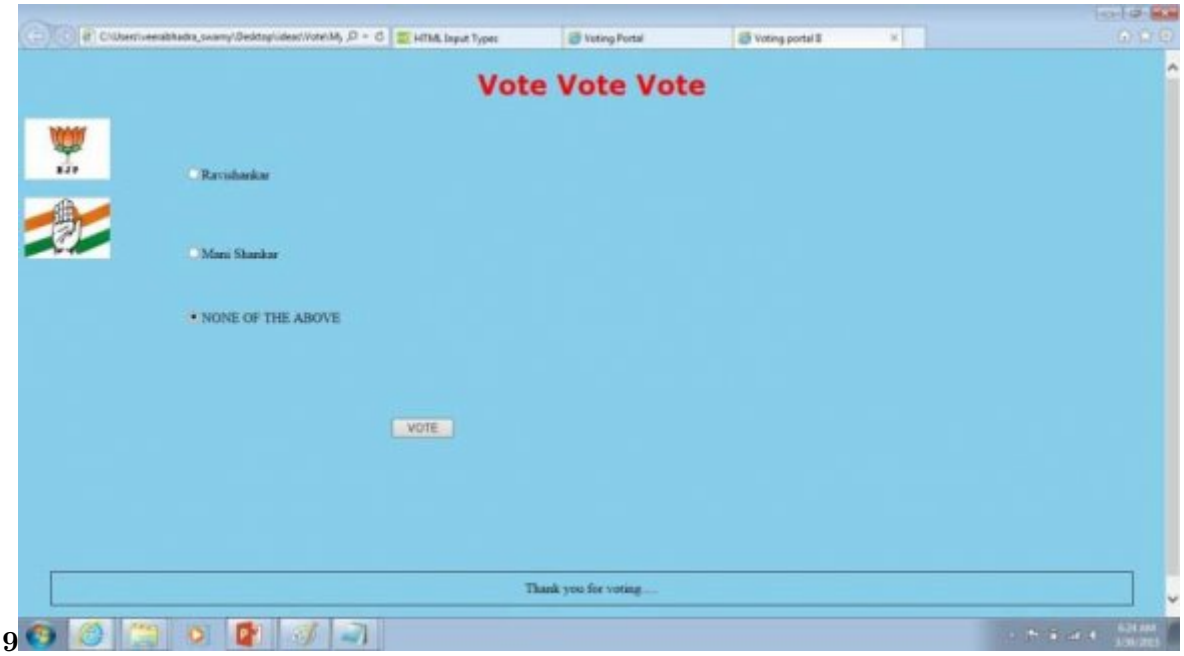
Figure 5: Figure 4 :Figure 5 :Figure 6 :

7

Figure 6: Figure 7 :

8

Figure 7: Figure 8 :



9

Figure 8: Figure 9 :

[Aggelos Kiayias An Internet Voting System Supporting User Privacy acsac.org ()] *Aggelos Kiayias An Internet Voting System Supporting User Privacy acsac.org*, 2006.

[Anand and Divya (2012)] 'An Efficient Online Voting System'. Ankit Anand , Pallavi Divya . *IJMER* July-Aug 2012. 2.

[Mohammed (ed.) (2013)] *Efficient E-voting Android Based System, IJARCSSE*, Dr.Aree Ali Mohammed (ed.) Issue11. Nov 2013. 3.

[Malkawi ()] Mohammad Malkawi . *Modeling and Simulation of a Robust e-Voting System, IBMIA*, 2009. 8.