
ADVANCED TECHNOLOGY IN EVM

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ABSTRACT:-In general EVM system there is some variation about the votes that means there are some possibilities of election fraud or malfunction of devices. For this purpose the new advanced technology is carried out which referred to free from such problem using Voter Verified Paper Audit Trial (VVPAT) system. This new technology is widely used in for secured phenomenon. Also this technique able to give high accuracy as well as better performance. The whole system is reliable by using advanced technique that is VVPAT system with additional to EVM. The complete mechanisms provide errorless system. In this paper presentation we are going to present idea about how to used advanced technology (VVPAT) in EVM for error free system and it becomes advantageous in use.

Keywords:-Electronic Voting Machine (EVM), Advanced technology in EVM, security in EVM, Errorless EVM, VVPAT System and VPR.

INTRODUCTION

In simple EVM system the feedback are not obtained to the voters. It means that the voters are not totally satisfied with his casted vote. Due to the imperfection casting of votes due to unsure of votes that must be casted to a person which has been chosen by the voters. The voter cast a vote to desire candidates but this vote casted to the same person are not guaranteed perfectly. To ensure that our vote are perfectly casted to candidate that must be selected by voter, a new advanced technology are preferred which provide the feedback to voters using ballot less voting system called Voter Verified Paper Audit Trial(VVPAT) or Verified Paper Record (VPR). This new advanced technology helps to detect malfunction or election fraud which is possible at the time of voting. It provides a mean to audit the store result in an electronic form. The VVPAT conclude as an independent verification system for voting machine. The whole system is designed such a way that to ensure votes to verify that their own vote was casted correctly, finely and perfectly without any error.

ADVANCED TECHNOLOGY VVPAT IN EVM

A VVPAT system stored vote in the form of paper slip inside the system rather than recording medium or memory medium. A VVPAT paper slip is visible and readable by human eye for specific time duration for every voters. Due to this voters are directly interpret their vote very easily. A device and software which potentially required for computer memory. The corrupt voting or malfunctioning machine might store vote other than as voter unnoticed. The insecure voting machine can record vote but, that can change quickly without any detecting the voting matching itself. For voting machine it would be more difficult to corrupt record without intervention by human. The possibilities to detect and verify that their votes are cast as intended and can serve as an additional barrier to destroying votes or changing as an error.

The implementation of advanced EVM that is implementation of advanced technology in EVM. The general EVM system and a VVPAT system are connected in a suitable form to construct a newly one machine. When a voter ready to cast a vote by pressing a button on ballot machine. This vote that is this information goes to the VVPAT system and from this the voter concludes that their vote has been recorded as intended clearly. To checkout any malfunction or fault in a device, a recount or rechecking are necessary. As per

election law a legal ballot that must be constituted by paper audit trail also it must be provided that the individual vote counts are conducted. Store vote allow only in non document ballot voting system if recounting is done.

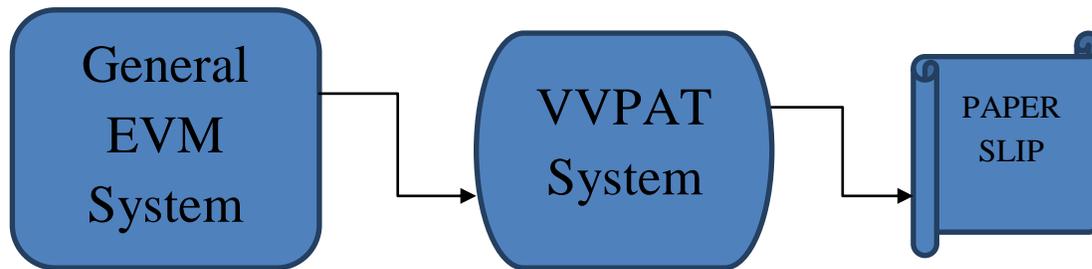


Figure1: Electronic Voting Machine Using VVPAT System

The above block diagram described the mechanisms of advanced technology in electronic voting machine (EVM) by employing Voter Verified Paper Audit Trail (VVPAT) system. The whole diagram consists of three stages. These are General EVM System, VVPAT System and Paper Slip mode

1. General EVM System: In general EVM system the voter allows to vote by pressing the button on ballot machine. The EVM System is cascade to VVPAT system for further process. Due to that the output of the EVM system is given feedback to the VVPAT System.
2. VVPAT System: In VVPAT System the output from the general EVM system is modified and become accurate and error free. It gives the verified result to the voter that must be casted at the time of voting. The VVPAT output described with the help of paper slip that is inside the system.
3. Paper Slip: The final output of whole system is described on the paper slip which is inside the system enclosed with glass. It is visible to human eye for specific time duration. The paper slip describes the correct information related to voting phenomenon. Due to this the voter satisfied with voting system and ensures that the system is working correctly.

FEATURES OF VVPAT

- When voters presses EVM button, printer generates a slip that contain name of voter, serial number and symbol of the candidates for whom the vote has been cast.
- Paper slip will remain visible to the voter upto specific time duration, through a glass covered window. Then it automatically fall and stored in a sealed box.
- For cross checking or verification of votes during recounting, the EC can use these slip in later.
- Paper slip is valid proof for voter that they can casted for a selected candidate.

ADVANTAGES OF VVPAT SYSTE

- The VVPAT system is secure and reliable.
- The high accuracy provide by this system.
- The instantaneous result is possible in this system.
- Unique fingerprint voter ID can be used, for identification purpose.
- Any error or faults can be detected by this system.
- It gives proof as subject to casted vote, which is correctly.

FUTURE SCOPE

- By the development in advanced technology, the fingerprint scanner is neither be complicated nor expensive for used. This system can be constructed in few years.

- Memory of fingerprint module can be achieved to high extent.
- For speciality purpose, to make it user friendly for voters, audio output can also be introduced in future.
- For storing the finger print image, external memory can be provided. This can be further used for security purpose.
- For future purpose it make easy & reliable.
- The system is very easy.

APPLICATION OF VVPAT

- Attachment of a printer to direct-recording electronic (DRE) voting machines that print paper records stored within the machine. Such designs usually present the record to the voter behind a transparent surface to enable a voter to confirm a printed record matches the electronic ballot.
- The records can be manually counted and differentiate to the electronic vote totals in the event of a dispute.
- The solution linking electronic ballot images and the voter-verified paper record with randomly generated unique voting session identifier is covered by patents issued and pending.
- Attachment of a printer to DRE voting machines that print paper records on special paper with security features.
- The printed page contains both a plain text record and a simple barcode of the voter's selections as per voter required.

CONCLUSION

- With completion of this paper, we conclude that by using error free VVPAT it is realise that there is no possibility of occurring fault.
- Due to advanced features of EVM it is used in widely range.
- It is easy to accommodate.
- Due to the available of semiconductor IC's the cost of hardware used in EVM are minimizes to a larger extent.
- It easy to store information by using VVPAT and it is used whenever necessary.
- For voter there is no need of any knowledge of any system or machine.
- The advanced EVM easiest to handle and it provide low cost.

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