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Voter Verified Paper Audit Trails

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Voter Verified Paper Audit Trails

The traditional balloting procedures concerning the casting and manual counting of ballots have been the norm in many jurisdictions since the beginning of the 19th Century. However, new technologies like the use of direct recording devices (DREs) and voter-verified paper audit trails (VVPAT) has changed entire process. Direct recording machines can tabulate votes quickly, while the VVPAT help voters verify whether they voted for their preferred candidate. This paper aims to discuss the VVPAT, what it is, as well as whether it will help resolve the issue of knowing a voter's intent.

VVPAT is a process that provides a response to the electorate using a structure that does not require the use of ballots. The main objective of using this method is to assist the people to independently validate their vote was cast properly and to the right candidate. Besides, VVPAT can be used to detect the possibility of election fraud by offering a means of auditing the votes captured in the DREs (DeMillo et al., 2018). It is important to point out that the VVPAT offers some major variances when equated to a paper system. It has a memory that can be read by a special program, as opposed to a paper VVPAT that humans can read. Furthermore, voting machines like the DREs that are not properly secured can have their records or contents altered without discovery by the balloting device itself. It is important to also highlight that voting machines are designed by people and can be corrupted. Once altered, these voting machines can store votes in a format that was not designated by the voter due to manipulation. However, this is where the VVPAT comes in as it allows the voter to check their votes were casted as anticipated. It serves as a barrier to the manipulation or destruction of votes.

India is one of the countries that have embraced the use of technology in voting. Voters are always urged to vote carefully and take time to verify that their votes went to their preferred

candidate. Furthermore, if the voters find out that their votes have not gone to the person they chose, they are required to file a complaint immediately with election officials at their polling station. The verification process takes around seven seconds and the voters can verify their votes on the VVPAT slip printed via a glass window. Additionally, the DRE assures voters that their votes are recorded and stored as intended (DeMillo et al., 2018). This, in turn, aids in the verification process. The VVPAT is also used in the United States. Depending on the election laws in different states, the paper audit trails may lead to election disputes that end up in the courts. In such cases, the VVPAT and the DRE offers a way of manually recounting the votes when courts claim it is necessary.

In a non-document balloting system, both the DRE voting machines and mechanical voting machines, the voter cannot verify tangible ballot to ensure that their intent was captured. Furthermore, a poll official cannot manually recount ballots when a dispute ensues. Because of this drawback, Shejvali (2014) argues that there is a likelihood of election fraud or malfunctions, hence calling for voter-verifiable paper audit trails because paperless polling systems only permit the verification of recorded polls. However, the votes stored in the system might not reflect the true voter intent because systems can be manipulated. Nonetheless, a major obstacle in adoption of paper audit trails is authority as well as enactment of verification process. Paper audit systems escalate budget in an election that is conducted using computerized voting systems, are challenging to implement, and require special hardware (Gibson et al., 2016). It is also difficult to use this type of auditing in America. Twenty-seven states have made it mandatory by law to have a paper audit trail for the DREs used in the course of public polls. Additional eighteen states do not call for their use but embrace their deployment in their local jurisdictions.

Knowing a voter's intent cannot be resolved by having a VVPAT attached to the DRE in an electoral process. First, when a voter makes their choice on a DRE, they do not know via their senses that they achieved their desired outcome. In this scenario, what can be said is that if the system has worked as intended, then voting has occurred (Shejavali, 2014). A system that allows the voter to verify how their voting process does not conform to the general norms of secret balloting. In this regard, it increases the possibility of vote-selling and voter extortion. Consequently, a malicious program can be introduced into a VVPAT system, hence altering the choices of a voter (Budurushi & Volkamer, 2014). In such a case, the malicious program can manipulate only a small portion of the votes in a manner that cannot be detected. At the same time, a VVPAT can generate a report when a voter is not seeing the verification process, in a case that takes the form of vote stuffing. In the end, even if the election officials were to discover additional votes that match the list of registered voters, it would still be difficult to distinguish legitimate and falsified ballots. On the other hand, the printing device can annul the produced copy once a voter exits and print a falsified copy. The fraudulent copies would remain undetectable since invalidated ballots are common presently (Shejavali, 2014).

In conclusion, a VVPAT cannot help in resolving the issue of knowing the voter's intent. Whereas the VVPAT is designed to check the DRE vote recorders, its technology relies on the same technologies of programming used in other electronics to come up with audit trails that are prone to manipulation. Moreover, the VVPAT systems cannot be used by some voters with a disability, hence knowing their intent during an election can be challenging. For instance, voters who are blind cannot verify their selection by utilizing a system in a way that is independent, private, and free from manipulation. Voting is secret and should be secret, but in such a scenario, it becomes difficult to verify whether the person's choice is respected. A voter suffering from a

mobility disability may find it difficult to verify their vote, in instances where they might have to pick a piece of paper in secret.

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