**Electronic Voting with Smart Cards**

Electronic Voting through the use of Smart Cards has become a recent trend all over the world. Smart cards provide a safe way to authenticate and identify users voting over the internet and are a great way for people living overseas to vote in their countries from remote locations. For electronic voting, a voter’s identification and authentication plays a vital role to ensure that only eligible voters should cast their votes, the ones who vote are unable to vote again, and eligible voters are not stopped from voting. Hence, electronic smart cards provide a promising future for conducting fair elections.

**How Smart Cards Work?**

A smart card is a plastic card that has embedded integrated circuits. They can be used for payments, access-control, application processing and data storage purposes. Similarly, smart cards are also used in electronic voting to identify and authenticate voters, securely storing and processing voting data like signing or encrypting votes. For E-voting purposes, smart cards with [microprocessor chips](http://www.cardzgroup.com/ContactSmartCard.html) are generally used, which not only store data but have their own operating system to process data in response to the situation in hand.

**Why Smart Cards for Electronic Voting?**

The use of smart cards for electronic voting has gained popularity across the world. Hence, governments are now issuing smart national identification cards, which can help in developing a secure approach towards identifying registered voters.

E-voting can achieve two main purposes. Firstly, it ensures that it’s only the eligible voters who vote once during the election and secondly, it offers an easy and secure way to vote online from remote locations without physically coming to polling stations.

**What Benefits Does it Offer?**

Electronic voting with smart cards offers numerous benefits. Let’s consider some of them.

* It is very hard to manipulate electronic voting, as opposed to traditional ballot paper voting system
* Smart cards use Integrated Processor (IC) to securely add, store and delete personal data. During e-voting, this data can be used for identifying and authenticating voters before they are allowed to cast their vote.
* It allows maximum participation, by letting all those away from their voting stations to still vote from remote locations. Hence, it allows for a fair representation of votes and results in a positive turnout of final results
* An electronic voting system can be easily audited by administrators to check that all user votes are issued correctly and according to the voter’s intention. For the voter’s satisfaction, a voting receipt can also be issued to them
* It results in better and efficient management of elections due to reduced implementation costs such as in conventional paper voting system
* There are little to no chances of errors in counting electronic votes, hence resulting in accurate and fast availability of results

**What about the Downsides?**

As with many advantages, electronic voting also has some downsides to it. The most obvious one, everyone does not have access to internet or computer, or has a position to have a smart card.

Furthermore, for some users, it may be hard to trust the transparency of electronic voting, since it’s still a new system. People with old school thinking may still prefer traditional paper-based voting.

**A Multi-channel Voting System**

While keeping this in mind, the best way to utilize smart cards for voting would be to devise a system that allows for different ways of casting votes. If countries integrate electronic voting with a system that uses paper and postal voting, they can utilize all the strengths of a smart card while simultaneously overcoming its weaknesses.

**The Way Forward**

When implemented in its true sense, electronic voting with smart cards can speed up results publication, increase ballot security and make voting much more convenient. But if not implemented properly, it can sabotage the entire purpose of election process. For fair and accurate elections, it’s important that the electoral process is transparent, precise and authenticated; and people can rightly choose their democratic leader.