Abstract

Voting is a fundamental decision making instrument in any consensus-based society and democracy depends on the proper administration of popular elections. In any election, there exists a set of requirements among which voters should receive assurance that their intent was correctly captured and that all eligible votes were correctly tallied. On the other hand, the election system as a whole should ensure that voter coercion is unlikely. These conflicting requirements present a significant challenge: how can voters receive enough assurance to trust the election result, but not so much that they can prove to a potential coercer how they voted.

The challenge of changing the traditional paper based voting methods used in many developing countries into electronic voting raises a set of functional and constitutional requirements. These requirements are governed by the country in which they operate and are usually not limited to
privacy, authentication, fairness, transparency, integrity and incoercibility. This paper presents a survey of electronic voting schemes and systems available to date, classifying them and pointing out advantages and drawbacks of each class. The survey is concluded by presenting a comparative analysis on electronic voting and suggests improvements on some recent e-voting schemes and systems.

References

- Gritzalis D. Principles and requirements for a secure e-voting system. Computers &
On the Development of Electronic Voting: A Survey

On the Development of Electronic Voting: A Survey


- Damgard I, Jurik M. A generalisation, a simplification and some applications of Paillier's probabilistic public-key system. In: Proceedings of public key cryptography, fourth international workshop on practice and theory in public key cryptography, PKC 2001,
On the Development of Electronic Voting: A Survey

On the Development of Electronic Voting: A Survey


**Index Terms**

Computer Science  
Security

**Keywords**

Electronic voting  
Cryptography  
Remote voting  
Verifiability