



ABSTRACT

Voting is a formal indication of a choice between two or more candidates or courses of action, expressed typically through hand-counted paper ballots or by show of hands. Like all other aspects of democracy, voting requires transparency, participation and accountability. Therefore, the efficiency, reliability and security of the procedures used are highly critical. The voting systems in most institutional bodies in the past have been marred with irregularities which have jeopardized this democratic process. There is therefore need for improvement in the voting system as a means of attaining the democracy most people advocate for, through the relevant technologies.

Electronic voting systems have the potential to improve traditional voting procedures by providing added convenience and flexibility to the voter. Numerous electronic voting schemes have been proposed in the past, but most of them have failed to provide voter authentication in an efficient and transparent way. On the other hand, GSM (Global System for Mobile communications) is the most widely used mobile networking standard. There are more than one billion GSM users worldwide they represent a large user potential, not just for mobile telephony, but also for other mobile applications that exploit the mature GSM infrastructure. In this paper, an electronic voting scheme using GSM mobile technology is presented. By integrating an electronic voting scheme with the GSM infrastructure, we are able to exploit existing GSM authentication mechanisms and provide enhanced voter authentication and mobility while maintaining voter privacy.

Below are other advantages that mobile voting systems offer;

1. Reduced costs in the materials required for printing and distributing ballots.
2. It permits access to more information regarding voting options and processes
3. Efficiency and accuracy in placing and tallying votes and displaying the results to the voters.
4. Minimal chances of invalid votes due to the use of option buttons to represent candidates.
5. Flexibility as mobile voting can support multiple languages, and the flexible design allows up-to-the minute ballot modifications.