

Challenge Response-Based Authentication for a Mobile Voting System

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Abstract : A manual voting system has been implemented worldwide. It has some weaknesses which may decrease the legitimacy of the voting result. An electronic voting system is introduced to minimize this weakness. It has been able to provide a better result, in terms of the total time taken in the voting process and accuracy. Nevertheless, people may be reluctant to go to the polling location because of some reasons, such as distance and time. In order to solve this problem, mobile voting is implemented by utilizing mobile devices. There are many mobile voting architectures available. Overall, authenticity of the users is the common problem of all voting systems. There must be a mechanism which can verify the users' authenticity such that only verified users can give their vote once; others cannot vote. In this paper, a challenge response-based authentication is proposed by utilizing properties of the users, for example, something they have and know. In terms of speed, the proposed system provides good result, in addition to other capabilities offered by the system.

Keywords : authentication, data protection, mobile voting, security

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