

BIOMETRIC SYSTEM BASED ELECTRONIC VOTING

MACHINE

ABSTRACT:

This paper focuses on simple, low cost fingerprint based electronic voting machine using Arduino UNO. An electronic voting system is a voting system in which the voters' and voting data is recorded, stored and processed digitally. The proposed system consists of controller hardware and software. The hardware is implemented with arduino along with fingerprint module. The proposed system gives the best solution for minimizing the time taken for identifying the voter. The design implemented in the FP-EVM is portable, flexible and with minimum power consumption. The designed system is user-friendly, easily adaptable and cost-effective. Further, the designed system has simple architecture, fast response time and scope for further expansion. The system uses thumb impression for voter identification as we know that the thumb impression of every human being has a unique pattern. Thus it would have an edge over the present day voting systems. The purpose of such system is to ensure that the voting rights are accessed only by a legitimate user and no one else. In this, creation of a database consisting of the thumb impressions of all the eligible voters in a constituency is done as a pre-poll procedure. During elections, the thumb impression of a voter is entered as input to the system. This is then compared with the available records in the database. If the particular pattern matches with anyone in the available record, access to cast a vote is granted. But in case the pattern doesn't match with the records of the database or in case of repetition, access to cast a vote is denied or the vote gets rejected. The result is instantaneous and counting is done. The overall cost for conducting elections gets reduced and so does the maintenance cost of the systems. The postal type of voting is not convenient for everyone, Hence a new option like vote from any places in Karnataka by using the pre saved details of AADHAR card and by choosing the specific area for voting it comes in handy so that it becomes easy for the non home persons to vote from any place inside Karnataka. The age is verified before voting and if the voter does not vote for more than three elections the citizenship will be canceled. The disabled persons will have a swipe machine where they will use their AADHAR card to vote. These simulations results are verified with the help of arduino vision.

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