

Bio Metric and Local Language Speaking Voting System Using Fingerprint and Voice Module

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ABSTRACT

Electoral system is gaining generous endorsement across the world is biometric voter registration (BVR), which experts describe as one of the potent means of solving the election riddle called rigging. A voting system or electoral system is a method by which the voters make a choice between options, often in an election. The main aim of the project is to design a biometric electronic voting system for native language speakers using ARM7. This has been used in the development process to widen access, comprehension and to reduce the possibility of disenfranchising who are illiterates. This has been developed using the Keil uvision 4 IDE tool.

Keywords: Biometric, Electronic Voting, Finger Print.

I. INTRODUCTION

Voting is the foundation of any democratic system of government, whether the system uses the direct or representative governance.

Electronic voting (also known as e-voting) is voting using electronic means to either aid or take care of chores of casting and counting votes. Depending on the particular implementation, e-voting may encompass range of internet services, from basic data transmission to full function online voting through common connectable house hold devices.

Electronic voting technology can speed the counting of ballots and can provide improved accessibility for disabled voters.

II. METHODS AND MATERIAL

A. Biometric Voter Registration

Biometrics literally means life measurement and is associated with utilization of distinctive physiological characteristics for identifying individuals. Though most important application related with biometrics is that of security, it is used as the computer interface too. A range

of biometric applications are being used for authenticating person's identity. With the use of various features including fingerprints, face, signature and iris, a person is identified.

Voter identification is required during two phases of the electoral process: first for voter registration in order to establish the right to vote and afterwards, at voting time, to allow a citizen to exercise their right to vote by verifying if the person satisfies all the requirements needed to vote (authentication).

Biometric voter registration system (BVRS) is a highly advanced biometric information system that allows enrolling and identifying millions of voters quickly and unmistakably.

The field of biometrics was formed and has since expanded on to many types of physical identification. Still, the human fingerprint remains a very common identifier and the biometric method of choice among law enforcement. These concepts of human identification have led to the development of fingerprint scanners that serve to quickly identify individuals and assign access privileges. The basic point of these devices is also to examine the fingerprint data of an individual and compare it to a database of other fingerprints.

Nearly everyone in the world is born with a finger print that is unique; a separate and comprehensively identifying attribute that sets us apart from the other billion people that inhabit this world. It is because of this fact that the fingerprint has proven such a useful part of biometric security. The very reason that finger print scanners are useful can be found in this fact as well. However, this is far from the only reason they are used.

B. Working Principle

In the project, ARM7 controller (LPC2718) has been used. The LPC 2148 is a general purpose 32 bit microprocessor, which offers high performance and a very low power consumption.

The block diagram of the project is shown in the figure 1. It consists of different modules for performing the operation.

- Finger print module
- Voice play back module
- LCD
- Switches
- Microcontroller ARM7

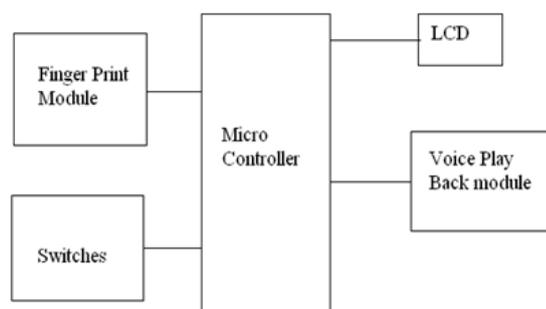


Figure1: Block Diagram Of Biometric Voting Machine

Initially the voter needs to register the thumb print by using the biometric finger print registration. During the elections, by using the finger print module it scans the finger print of the candidate need to be vote. If the finger print of the candidate matches with the registered finger print then the machine gives the instructions through voice in the particular registered language to cast the vote. This is done by using the voice play back module. Then the particular candidate is eligible and can cast the vote using switches.

The finger print module also checks whether the candidate is new or already registered. Thus it can be helpful for cast the vote rigging free. It also helps to

detect unauthorised person, for example, whether the person belongs to particular constituency, having voter id or not. Appropriate instructions are displayed on the LCD screen.

C. Advantages

The advantages of the system are

- The system is highly reliable and secure.
- Illegal practices like rigging in elections can be checked off.

III. CONCLUSION

In this project, the implementation of the BEVS system with the native language is presented. The system will be sufficiently robust and would carry out instructions as well as guide to vote in the voters native language.

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