Implementing Finger Print Based E-Voting System

G.Aarthi,M.Dharani Devi,K.Sowmia Prethi
Department of Computer Science and Engineering,
Indra Ganesan College Of Engineering
Trichy,Tamilnadu.

J.Jenifer M.E,Assistant Professor,
Department of Computer science and Engineering,
Indra Ganesan College Of Engineering,
Trichy,Tamilnadu.

Abstract— **The heart of democracy is voting. The heart of voting is trust that each vote is recorded and tallied with accuracy and impartiality. The accuracy and impartiality are tallied in high rate with biometric system. Among these biometric signs, fingerprint has been researched the longest period of time, and shows the most promising future in real-world applications. Because of their uniqueness and consistency over time, fingerprints have been used for identification over time. However, because of the complex distortions among the different impression of the same finger in real life, fingerprint recognition is still a challenging problem. Hence in this study, the authors are interested in designing and analysing the Electronic Voting System based on the fingerprint minutiae which is the core in current modern approach for fingerprint analysis. The new design is analysed by conducting pilot election among a class of students for selecting their representative. Various analysis predicted shows that the proposed electronic voting system resolves many issues of the current system with the help of biometric technology.**

Keywords— Biometric, Fingerprint,Minutiae, Electronic Voting.

I. INTRODUCTION

In every country Election is a basic Process of democracy which allows people to show their opinions by electing their leaders. Traditionally in a manual, paper based election system, voters have to reach at polling place to cast their votes by standing in a long queue, therefore it is very much difficult for voters to cast their votes, because of this there is a low rate of vote casting. This traditional process is used to less the transparency because there could be chances of cheating at voting time and at manually vote counting time.

Most of the times in traditional process of voting, there are more chances of occurring error while counting votes and most of time voters looks for to cast their votes more than once. So in this way this system makes a trouble and makes wars among people. So to overcome all this problem, this naturally calls for a fully automated online computerized election process. In addition to overcoming commonly encountered election problems, electoral vote counts are done in real time that by the end of elections day. Nowadays voter can cast their vote through the ballot machine so, the results are automatically out. In ballot machine the result are automatically comes out.

It is a fundamental demand of countries to enhance their election system and very advanced technique. Now due to rapid enhancement in computer technology and telecommunication world,online voting systems based on Biometric fingerprint are to be introduced, which makes easier elctions and lessens all the traditional election systems" problems.

Biometric authentication was first introduced in the 1970s and early 1980s. There are two traits in biometric authentication system. They uses the physiological (fingerprints, face, hand geometry, iris) and/or behavioral traits (voice, signature, keystroke dynamics) of an individual to identify a person or to verify a claimed identity.

We are presenting a new Electronic Voting System with Fingerprint scanning that will overcome the drawbacks of the current voting methods that are used in India. Currently, the voting system in India is inefficient and vulnerable to outer threats, the only thing that the security checks is a voter ID card, which these days are faked by many. It is slow and counting the votes manually can take a long time. In some rural areas, where there is not much security available, polling booths are captured and often most ballots are destroyed. So, the development of such a system which is online will cut out these possibilities and many votes can be saved through this system, even if such incidents occur.

Integrity of the election process will help in determining the integrity of democracy itself. So the whole system of election must be secure and robust against a variety of fraudulent behaviors. System should be transparent and comprehensible so that voters and candidates can accept the results of an election.

II. PROPOSED METHODOLOGY

The proposed system is the Biometric online voting system with biometric fingerprint .It determines the particular voter by his/her fingerprint whether he/she is a valid voter or not. It reduces the man work. There is no loss of registration forms. There is no false voters. It allows particular voter to cast the vote online and update the database in the server. Biometric online voting system uses finger print id to retrieve the complete details about the voter.

III.METHODOLOGIES

III.A)IMAGE ACCQUSITION

Fingerprint recognition or fingerprint authentication refers to the automated method of verifying a match between two human fingerprints. fingerprints are one of many forms of biometrics used to identify individuals and

verify their identity. the analysis of fingerprints for matching purposes generally requires the comparison of several features of the print pattern. these include patterns, which are aggregate characteristics of ridges, and minutia points, which are unique features found within the patterns.
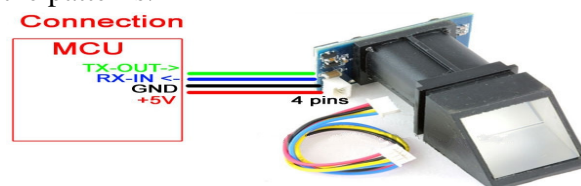

FIG.III.A)FINGER PRINT DEVICE

III.B).MINUTIAE *FEATURES*

The major minutia features of fingerprint ridges are ridge ending, bifurcation, and short ridge (or dot). The ridge ending is the point at which a ridge terminates. Bifurcations are points at which a single ridge splits into two ridges. Short ridges (or dots) are ridges which are significantly shorter than the average ridge length on the fingerprint. Minutiae and patterns are very important in the analysis of fingerprints since no two fingers have been shown to be identical.
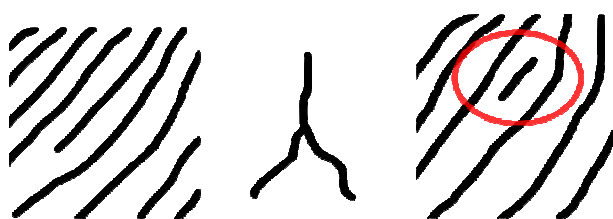
III.B)1)RIDGE B)2)BIFURCATION 3)SHORT RIDGE

III.C) POLLING MODULE

Polling is the process where the computer or controlling device waits for an external device to check for its readiness or state, often with low-level hardware. These processes can be as minute as only reading one bit. This is sometimes used synonymously with busy-wait polling. In this situation, when an I/O operation is required, the

computer does nothing other than check the status of the I/O device until it is ready, at which point the device is accessed. In other words, the computer waits until the device is ready. Polling also refers to the situation where a device is repeatedly checked for readiness, and if it is not, the computer returns to a different task.
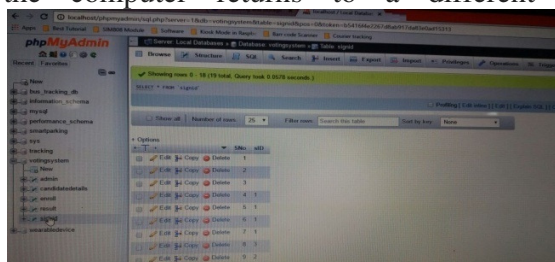

FIG.III.C)POLLING MODULE

III.D)VOTE ANALYSIS

A poll worker ends the election process by inserting and adminstrator (a special card that can only be used to end the election) into the voting terminal. Upon detecting the presence of such a card (and, in the case of the administrator card, checking a PIN entered by the card user), the poll worker is asked to confirm that the election is finished. If the poll worker agrees, then the voting terminal enters the post-election stage. Election results are written to a removable flash memory card and can also be transmitted electronically to the back-end server.

VI. CONCLUSION

The idea behind E-voting system using fingerprint is done by minutia features. This project offers the voters to cast easily through internet. Vote counting is also made easy by the OVS since it's just a matter of querying the database. It is very Accuracy Convenience Reliability. It is Verifiability Flexibility Consistency. Democracy Mobility Social Acceptance for all. Privacy to avoid flase voters. OVS will be an inexpensive, and less time consuming method once a system

exhibiting national standards and the above mentioned characteristics is implemented.

VII. FUTURE ENHANCEMENT

Future enhancements focused to design a system which can be easy to use and will provide security and privacy of votes on acceptable level by concentrating the authentication and processing section .In case of online e-voting some authentication parameters like facial recognization, In case of offline e-voting some authentication parameters like, Finger Vein and iris matching detection can be done.

REFERENCES

1.Syed Mahumud Hasan. Md.TahmidRashid, Md.Shadman
Sakib [2016], **"Development of Credible and Integerated Electronic Voting Machine Based On Contactless IC Cards, Biomatric Fingerprint Credentials and POS Printer",** IEEE Canadian Conference on Electrical and Computer Engineering(CCECE),Vol. 3.

2.Alaguvel. R [2013] ," Biometrics using Electronic Voting System with Embedded Security", International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Vol. 2, Issue 3 March**.**

3.Bassam Daya [2014] 4 JAN 2014, " AN E-VOTING SYSTEM FOR LEBANESE ELECTIONS", IUTdeSaida,Université Libanaise, Liban, Saida BP 813 Vol. 3 **.**

4.Kamaran Hama Ali Faraj [2015] ," FINGER PRINT AND BARCODE FOR VOTING SYSTEM ", Asian Journal of natural and applied science Vol. 4.

5.Nitankohli 3 May 2016 ," A Realtime E-voting system", International journal of Engg and Tech Vol. 35 .