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A Secure Based Approach in M-voting for Human Identification based on Iris Recognition using Biometrics

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Abstract: ***The iris recognition is one of the preeminent biometrics characteristics which are used for security purpose. This biometrics technology is related to human physiological and behavioral characteristics. This paper illustrates to improve the robustness and accuracy of iris recognition which is used for the authentication purpose in voting system to reduce the complexity in future by using the corner detection, matching process and Gabor filtering.***
The major issues in the voting process are security, furry to vote, standing in a queue and time.
Keywords: corner detection, robustness, accuracy, matching, Gabor filter.

I. INTRODUCTION

"An election is a moral horror, as bad as a battle except for the blood; a mud bath for every soul concerned in it." - George Bernard Shaw

M-voting is the technique of casting their votes through the cell phones .Mobile voting using biometrics is a highly confidential and secured technology using iris recognition for authentication In this paper we have given a brief explanation about highly confidential and secured based m-voting.

II. EXISTING SYSTEM

Indian Electronic Voting Machines (EVM) use a two-piece system with a balloting voting in which the voter with a button for each choice connected by a cable to an electronic ballot box.

An EVM consists of two units:

Control Unit
Balloting Unit

The Control Unit is with the Presiding Officer or a Polling Officer and the Balloting Unit is placed inside the voting compartment. Instead of issuing a ballot paper, the Polling Officer in-charge of the Control Unit will press the Ballot Button. This will enable the voter to cast his vote by pressing the blue button on the Balloting Unit against the candidate and symbol of his choice. The controller used in EVMs has its operating program fetched permanently in silicon at the time of manufacturing by the manufacturer. No one (including the manufacturer) can change the program once the controller is manufactured. As soon as the last voter has voted, the Polling Officer in-charge of the Control Unit will press the 'Close' Button. Thereafter, the EVM will not accept any votes. Further, after the close of poll, the Balloting Unit is disconnected from the Control Unit and kept separately. Votes can be recorded only through the Balloting Unit. Again the Presiding officer, at the close of the poll, will hand over to each polling agent present an account of votes recorded. At the time of counting of votes, the total will be tallied with this account and if there is any discrepancy, this will be pointed out by the Counting Agents .It is not possible to vote more than once by pressing the button again and again.

As soon as a particular button on the Balloting Unit is pressed, the vote is recorded for that particular andidate and the machine gets locked. Even if one presses that button further or any other button, no further vote will be recorded. This way the EVMs ensure the principle of "one person, one vote". During the counting of votes, the results are displayed by pressing the 'Result' button.

There are two safeguards to prevent the 'Result' button from being pressed before the counting of votes officially begins.

This button cannot be pressed till the 'Close' button is pressed by the Polling Officer in-charge at the end of the voting process in the polling booth.

This button is hidden and sealed; this can be broken only at the counting center in the presence of designated office.

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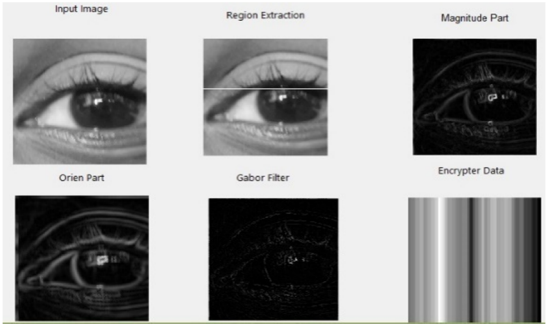
III. PROPOSED SYSTEM

The anticipated idea based on the iris recognition to describe the authentication procedure in the voting system. Biometrics characteristics cannot be lost or forgotten and are extremely difficult to copy, share and distribute. It requires the person to be present physically. The motive behind the use of iris recognition is that each individual have different iris structure and eyelashes. It is impossible that two persons have same iris and eyelashes and even the blind people can vote because their iris as an encrypted image will be present. This kind of security provides the better authentication than any other method.

A. Iris Processing

Iris Recognition systems can be explained as follows:

1) Input image
2) Region Extraction
3) Magnitude and orientation part
4) Gabor filtering
5) Encrypted image

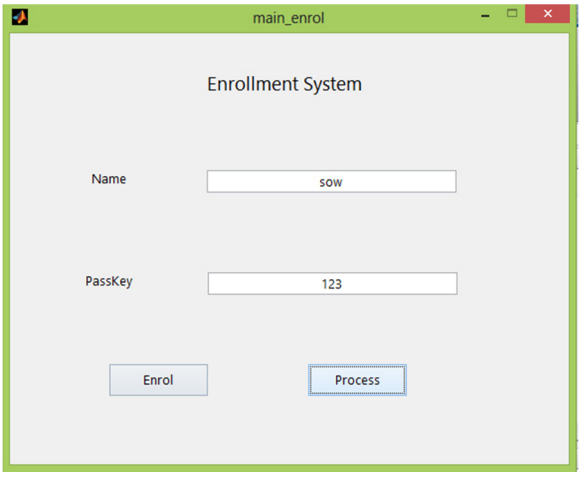


IV. METHODOLOGY

A. Phases of voting process

There are two types of phases are done while doing this process:

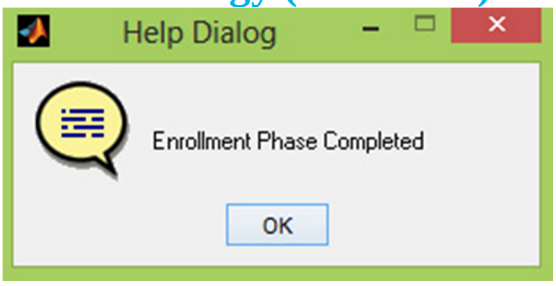
1) *Directory phase:* In directory phase, there are two folders train folder and test folder. The train and the test folder contain the same images. We can add n number of images into it. This phase is like a database which helps them to continue with an enrollment phase.
2) *Enrollment phase:* Enrollment phase is enrolling their databases with their iris to the administrator or a government authorized person and they will afford the user id as well as the password or a passkey for an individual.



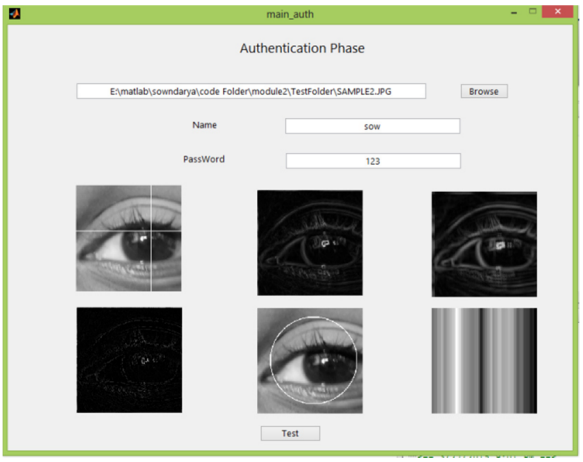
For each and every individual iris it gives approximately about 10 seconds of time for entering username and passkey. Only once the enroll and the process key is pressed. After enrollment it automatically shows a dialog box like this.

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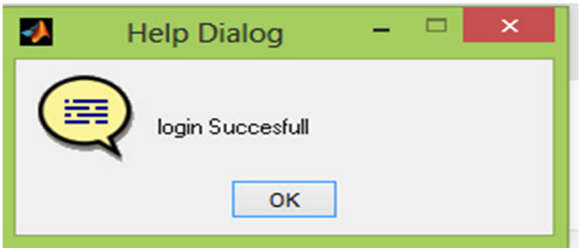
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3) *Authentication phase:* The authentication phase take place on day of voting process. The authentication phase appears like this. In this phase the user id, passkey and the iris image is also given



In this phase only the matching pattern is done if suppose the specified user id and passkey and the image is approved then that person is eligible for casting their vote and it shows a successful login as shown below



V. CONCLUSION

We have presented a newer approach to the voting process, which will surely bring a change. We can reach the dream day, the peaceful election in which everyone can participate without any discrimination, threats, and risks. Dream day is nearer…

VI. ACKNOWLEDGEMENT

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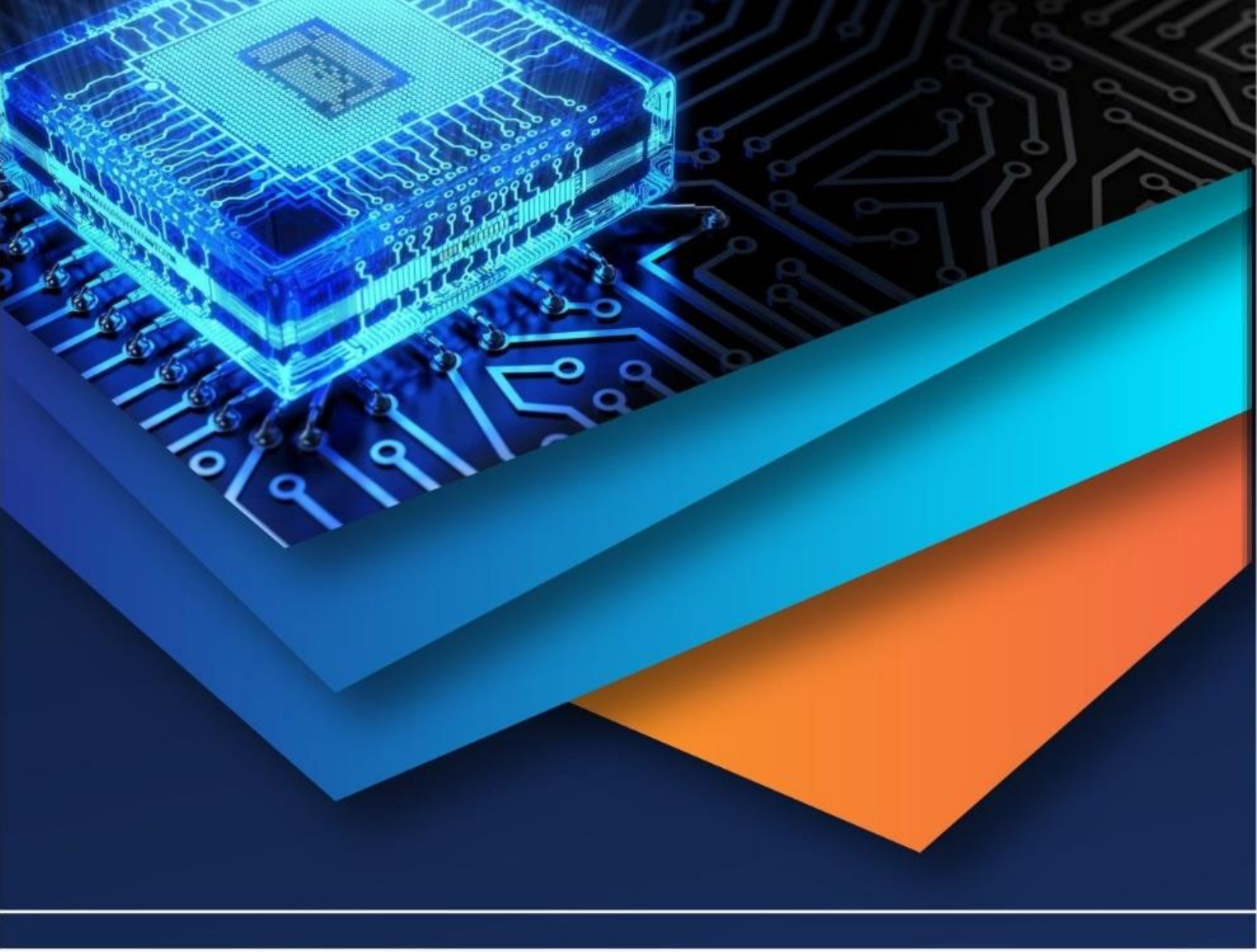


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