

E-VOTING WITH FINGER RECOGNITION & WATCHDOG (WEBCAM) USING CLOUD COMPUTING

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ABSTRACT

From last few year, in Information and Tele-Communications Technologies there is rapid advancement in cloud computing. This paper gives the details of requirements, design and implementation of a generic and secure electronic voting system where voters can cast their votes any-time, anywhere and mainly to cast a vote to that person to whom voter want to cast a vote using a number of electronic devices including private computer networks, web technology. This paper exhibits the notion behind the hype of cloud computing and evaluates its relevance to electronic government and electronic voting information system. Adopting a cloud computing approach for electronic voting solutions is investigated, reviewing the architecture within the previously described context. This E-Voting system is based on a Biometric i.e. fingerprint recognition technique. In fingerprint recognition technique, fingerprint matching technique is used to validate the user. Fingerprint matching is the process used to determine whether two sets of fingerprint ridge detail come from the same finger. There exist multiple algorithms that do fingerprint matching in many different ways.

Keywords: E-Voting System, Cloud Computing, Biometric device, Computer network

INTRODUCTION

In every country, Election is a basic process of democracy which allows people to show their opinions by electing their leaders. [1] As the modern communications and Internet, today are almost accessible electronically, the computer technology users, brings the increasing need for electronic services and their security. Usages of new technology in the voting process improve the elections in natural. This new technology refers to electronic voting systems where the election data is recorded, stored and processed primarily as digital information. Countries all over the world are examining e-voting [4], for it has some striking advantages over traditional paper voting, including security for casting votes, accuracy of counting and analyzing votes, options to conduct voting in a centralized and decentralized manner, etc. Traditional voting system is a time-consuming and very much prone to errors. Every country has different needs. That's why every electronic voting solution we design is different.

E-voting system is secure way to cast the vote as it must meet security requirements such as confidentiality, integrity, fairness, forgery attack, verifiability and so on.[1][2] This makes E-voting system to be more vulnerable than traditional voting due to the nature of digital processing of election data which can be easily manipulated. The ultimate aim of E-Voting is to provide voters a good environment so that voters can cast their votes with minimum cost and efforts on the internet[1][3]. Auditable, transparent, secure and accurate people can trust the results because it allows for a process that is so auditable, Increases accessibility: meaning it's easier for disable people to vote independently visibly secure. this way could involve asking

voters for Vote Id or passwords. Generally, this procedure also involves keeping track of who has already voted so that eligible voters may vote only once. Moreover, the traditional way of voting generates mores constraints; election fraud could be prevented by using physical security measures, audit trails, and observers representing of all parties involved. But the prevention of election fraud is made more difficult by the frequent requirement that votes remain private [6].

Electronic voting refers to the use of computers or computerized voting equipment to cast ballots in an election. Sometimes, this term is used more specifically to refer to voting that takes place over the Internet. Electronic systems can be used to register voters, tally ballots, and record votes [5].

RELATED WORK

System Architecture

The system ensures only one-person, one-vote (democracy) property of voting systems. The voter fingerprint, Webcam, voter's SIM, voting ID and voting codes of a voter intending to cast his/her ballot are matched at every voting attempt to prevent multiple voting. During registration, fingerprints of new electorate about to be registered are matched against exiting fingerprints in the database to prevent multiple registrations.

System Involves

- 1.Server
- 2.Client
- 3.Fingerprint Recognition
- 4.WatchDog(Webcam)

Module 1: Create Account

The voter has filled the registration form first. In that all information regarding voter is correctly fill by voter. After filling all necessary information the account get created at server site. Delete Account: They have privilege of deleting the created account. Edit Account: If any necessary are there, then server site can performing some edition over there. DB worker: DB worker can maintain the database of whole users. Add Candidate: After creation of voter account the server site validates that voter. Authenticate Voter: Server can authenticate the user's identity. Count Server: There is count server at server site which tally a final result as well as it count the duplication of records and maintain a log for that. Dispatch Result: Final step is dispatching a result.

Module 2: Client

Create Account

Voters have to fill all the necessary information on the particular site. After the fill the form with necessary documents the voter account get created at server site. Then voter can perform all operation which privilege they have. Vote: At the Election Day, voters just have to login into his/her account which is previously created. After login successfully, voter can cast his/her voter to their choice person.

Login

The voter can login into his/her account at any time. In this login, voter can check to whom he/she vote, and whether his/her vote is tally in final result or not. E-Voting System Server Client

Fingerprint Recognition Creating, Editing, Deleting Accounts Authenticate Voter Counter Result Display Signup Login Casting Vote Get Result Finger scanner Create Abstract Image Recognize fingerprint International Journal of Emerging Technology and Advanced Engineering

Module 3: Fingerprint Recognition

The Basics about fingerprint: A fingerprint is comprised of ridges and valleys. The ridges are the dark area of the fingerprint and the valleys are the white area that exists between the ridges. Many classifications are given to patterns that can arise in the ridges and some examples are given in the figure to the right. These points are also known as the minutiae of the fingerprint. The most commonly used minutiae in current fingerprint recognition technologies are ridge endings and bifurcations because they can be easily detected by only looking at points that surround them.[2]

PROPOSED METHODOLOGY

We proposed the new feature that is WatchDog (WEBCAM) it is technology that allow us to take snap help in video conferencing, chat, business meeting so we have proposed that we have two way validation process first Fingerprint Recognition and Watch Dog(Webcam) so voter not only eligible through login into the system but also voter will go through Biometric verification we have strong point is voter will be verified accurately .

When voter login into the system voter has to select best the candidate then voter has to go through the Biometric verification so (Fingerprint Recognition and Watch Dog(Webcam)) so data will be dispatched to the server while dispatching system generate id against the voter and vote will be counted

WatchDog (Webcam):

Webcam is devise which is use to take snap, video conferencing ,video chat this module provide server to take a snap of voter basically this is process where voter will first Authenticate through Fingerprint Recognition and then (watchdog) will take snap of person (voter) and send it to the server via network the process also called as validation process this is new technology that allow system to be more accurate, make real entity.

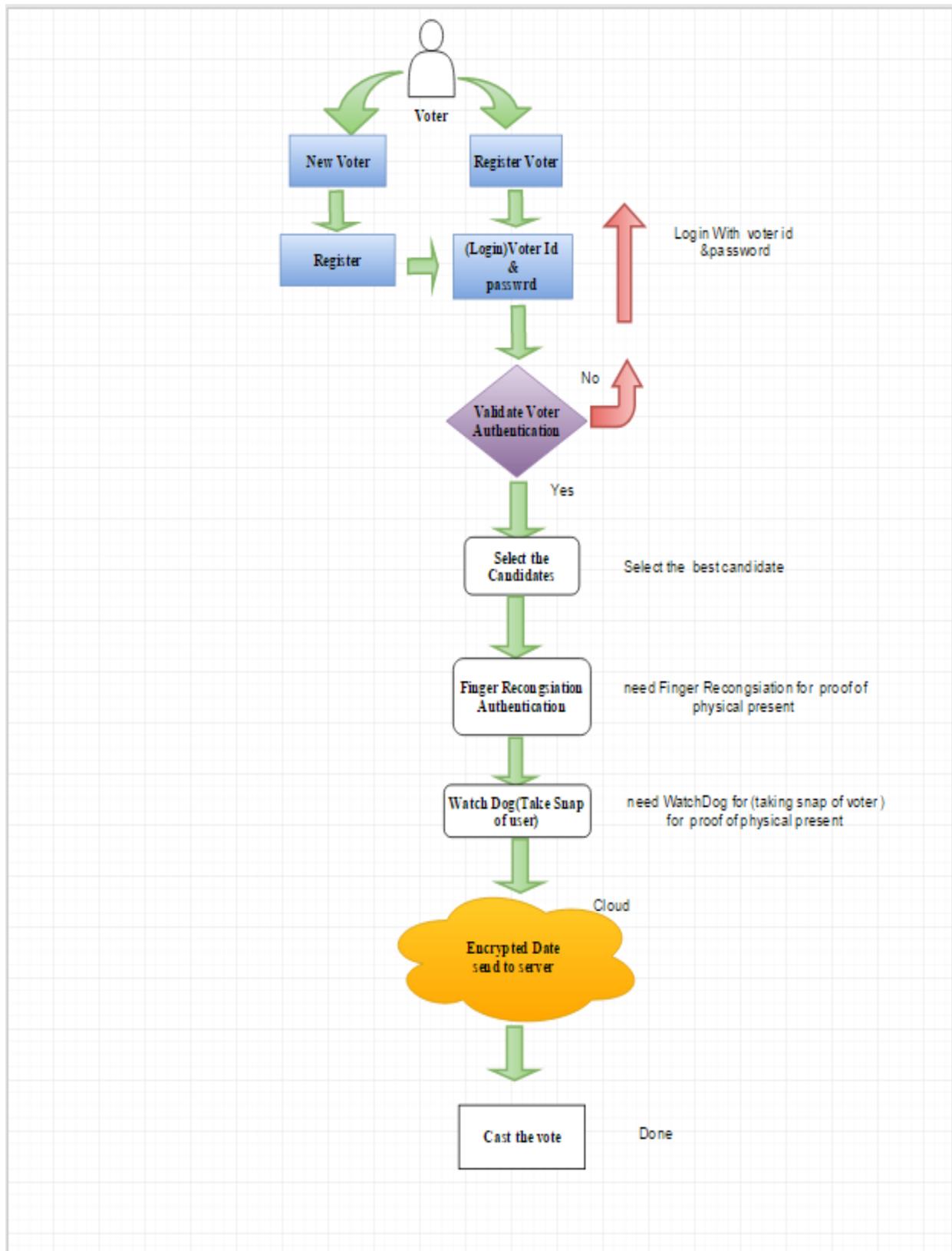


Fig1. Proposed Model for E-voting System

PROPOSED SYSTEM

Proposed system not only authenticate the voter through Finger Recognition but also using WatchDog technology. Basically this is webcam process where voter has to give snap of themselves for assurance to voter is physical present so this system is two way validation process in which voter has to go through two validation process then vote will count. We studied about Existing E-Voting System which are not concern to be part as strong validation process and also chances of fraud become high.

Proposed system will not only used for casting the vote system provide you graphical view of candidate according to the voter id so voter does not have to search for candidate and also providing background information about candidate works so voter has advantage over choosing a perfect candidate and cast the vote.

CONCLUSION

The system not only focus on enhance the security of the data but also allow smoothing and faster the data so that user will not have to wait for cast the vote due to many request to the server. E-Voting is provide user friendly view so that user will ease interact with system with timely manner .generally Traditional System provide the machine to cast the vote only by physical present of the person but it is time consuming process such as wait in queue this system provide. Fingerprint Recognition and WatchDog feature which allow provide date to sytem to validate voter not only by Fingerprint Recognition but also by WatchDog(taking snap of person) and data send to the server and done.

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