

“Mobile Based Voting System For Real Time Applications”

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Abstract- The major purpose of Research Work is to increase the number of voters, make voting easier and avoid the mischiefness (viz. rigging) with voting data during elections. On one hand it will minimize the possibilities of rigging of votes while on the other hand it will reduce the massive cost which is put in for elections. It will emerge as a potent weapon for change in the system whereas it will require very less infrastructure and man power resulting in lesser use of government funds for elections which can be effectively diverted for the various progressive work of the nation. It

also saves considerable printing stationery, completely rules out the chances of invalid votes. Here for remote voting purpose we use wireless device like mobile for casting the votes. Using SMS we can vote from our home just by sending a sms a predetermined configuration from our mobile. The entire voters will be provided with a unique password also, recognizable proof number. For voting we need to send a-sms in a predefined format. The voting system will receive this messages and decode the message and verify the Pin number and identification number if both

number matches the voting system will accept the vote else the message is rejected by the machine. For invalid passwords "ERROR" will be shown on screen. User is allotted 15 seconds to enter his password & choice. Here three attempt will be given for entering correct password if it is correct then it goes into next step of voting else it will disconnect.

Keywords: SMS, ERROR

1. INTRODUCTION

Since we belong to Engineering discipline, let's start from the term's inception itself. What is Engineering? The American Engineers' Council for Professional Development (ECPD, the predecessor of ABET) has defined "engineering" as: the imaginative use of scientific principles to design or develop structures, machines, mechanical assembly, or producing forms, or works using them singly or in combination; or to construct or operate the same with full perception of their outline; or to figure their behavior under specific operating conditions; all as regards anticipated capacity, financial aspects of operation and safety to life and property. Now, let us discuss a little about changing trades in industries across India. Since the last year or so, one trend is vastly catching up amongst big corporates or to be precise corporate honchos i.e. allotting work at a third party location. This experiment till now has been just given a try in metros. Under this, employees of a company go to a nearby location from their place and do their task. On one hand this saves the travelling time which takes heck out of the daily life of employees.

On the other hand it is to everyone's surprise saving huge sums of corporate houses. One thing which stands common and tall amongst all these incidences across the globe is that the entire world is vouching for a change. And as slated

above we the Engineers must grab this opportunity first to bring in the change with the implementations of various principles, theories etc. which we have learnt while imbibing education. Keeping this mood of the world and especially India in mind and keeping our domain as vision, we thought of doing some research with an idea of Mobile Based Voting Machine. On one hand it will minimize the possibilities of rigging of votes while on the other hand it will reduce the massive cost which is put in for elections. It will emerge as a potent weapon for change in the system whereas it will require very less infrastructure and man power resulting in lesser use of government funds for elections which can be effectively diverted for the various progressive work of the nation.

2. NECESSITY

The aim of „MOBILE BASED VOTING Framework' is to add to an arrangement of enhanced offices. The proposed system can overcome all the limitations of existing voting system. The system provides proper security and reduces the printing stationery.

The necessity of our project is to provide:

- Security of data.
- Completely rules out of invalid votes.
- Make the voting easier.
- Saves time.
- Accurate counting of votes.
- Easy to transport, store, and maintain.
- User friendliness.

3. SECURITY PROBLEMS WITH EVMs

There is overall acknowledgment of the requirement for a paper trail in conjunction with EVMs. Electronic voting was introduced in numerous nations. Be that as it may, genuine questions were soon raised about the security, accuracy, reliability and verifiability of electronic elections. In October 2006, the Netherlands banned the use of EVMs. In 2009, the Republic of Ireland declared a ban on their utilization. Italy has gone with the same pattern. In Spring 2009, the Supreme Court of Germany ruled that voting through EVMs was unlawful, holding that straightforwardness is a constitutional right but efficiency is not a constitutionally secured esteem.

The official stand of the ECI is that EVMs are 100 per cent reliable and tamper-proof, that the functioning chips have their directions permanently blazed into them at the time of manufacture; that these chips are then "mother-sealed" into the EVM; and this can never be modified. This case is presented as an immaculate premise, a mantra requiring no confirmation thereof.

The field of hacking is persistently creating, and ECIL's and BEL's advisers belong to an era of soldering two wires together (the "diode and triode time"). They are in no position to counter the averment of international researchers that no electronic machine has been concocted that cannot be rigged or hacked.

The ECI must cut its losses also, consent to a paper receipt. In the event that it can't organize that, we should return to ballot papers. Ballot papers are riggable at a "retail" level; yet with EVMs, a whole race can be stolen with a chip.

4. WHAT MOBILE BASED VOTING SYSTEM OFFERS

This system is controlled by a microcontroller ATMEL AT89C51 and a GSM module and EEPROM is used for

memory storage. The undertaking works in the accompanying ways:

1. Switch on power supply.
2. Message wait will appear on LCD.
3. Type #22 followed with applicant number to enter the vote where 22 is the password.
4. If vote is casted then "vote casted successfully" on the LCD as well as on mobile screen also & if not then "invalid vote try again" will appear.
5. To check the number of votes press the button on the PCB and number of votes of each candidate & total number of vote will appear on LCD.
6. A reset key is available to reset the microcontroller.

5. ADVANTAGES

1. Cell phone based voting machine is capable of sparing extensive printing stationery and transport of large volumes of electoral material.
2. It is easy to transport, store, and keep up. It completely discounts the chance of invalid votes.
3. Its use results in reduction of surveying time, resulting in less issues in constituent preparations, law and order, candidates' expenditure, etc. furthermore, simple and exact numbering with no naughtiness at the counting center.
4. It saves time.
5. It makes the voting easier.

6. It also increases the number of voters.

6. CHALLENGES IN FRONT OF MOBILE BASED VOTING SYSTEM

Every progress has challenges. Implementing m-elections will also bring a series of challenges. Some of the typical challenges for e-elections are naturally shared by the m-elections efforts. Lanwin (2002) states some of these challenges. Among them, we will visit those which are most relevant to m-elections including infrastructure development, privacy and security, legal issues, mobile penetration rate and accessibility.

•**Infrastructure development:** For m-elections to flourish, the electronic and data innovation base must be available. This infrastructure is both physical and „soft“. The physical base alludes to the innovation, hardware, and network required to implement m elections. No less important are delicate frameworks, for example, institutional courses of action, and software that make m-election transactions possible.

•**Privacy and Security:** These are the most noteworthy concerns citizens have about m election. The general fear is that their mobile phone numbers will be traced, when they will cast their votes for or against the government. The mobile organizations and scientists must Beat the doubt, and assure mobile users that people’s privacy is protected and the data won't be sold to outsiders.

Albeit encryption of SMS messages is relatively safe, mobile phone numbers and cell phones are generally simple to be hacked. Wireless networks are vulnerable because they use public wireless transmissions to send signals. In light of block attempt on the whole traffic on the Internet, there is a big chance for outsiders to assault on remote systems to take

critical data and temper with documents and files. Therefore in the planning stage of the m- election project, privacy and security issues should be considered so that developers will be able to select appropriate mobile devices.

•**Accessibility:** The success of mobile elections will depend on largely the number of its clients: the natives. Be that as it may, financial variables such as income, education level, gender, age, handicap, language contrasts and provincial inconsistencies will influence the nationals' attitude towards mobile elections. In order to increase national interest and give subject arranged administrations, mobile companies need to offer easy access to m-government data in option frames, potentially, utilizing video and voice communications.

• **Legal issues:** Many countries far and wide have not yet embraced the Law of Reasonable Data Practices, which spells out the rights of data subjects (nationals) and the obligations of the information holders (government). In some cases the law does not recognize mobile archives and exchanges. There is no reasonable legitimate status for government’s online publications, no regulations and laws for online fillings, online signings, and on online taxable transactions.

7. CONCLUSION

The analyzed approach guarantee about confirmation but not 100% about the security of system. So to achieve security, need to associate various technologies viz. thumb match, eye match, etc. Hence I conclude that if further researches are being carried out in the above said fields then it would be difficult for intruder to disrupt the system. In this way we can satisfy security requirements.

8. FUTURESCOPE

With the use of this technology, we can make a way for a huge electronic revolution across a country like India. Further researches can be carried out for ensuring more security to the system. Also in future use of thumb impression or eye match technology can be further added to the system to ensure proper and legitimate voting.

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