

# Review: Online Voting System Using Android

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**Abstract:** The traditional approach there was a need to go to the voting booth & cast a vote. People from various locations who don't have their voting cards are not able to cast their votes. Also validation of the user was poor and not appropriate. There was a bundle of manual work in the traditional voting system which was very time consuming process. Therefore the new system is developed to eliminate the efforts needed in the existing voting process. The given new projected system has an application which is developed for android phone via which the user can cast his or her vote from anywhere on the face of the globe. The user can registers by giving his personal details and the image of his face which gets stored in the database presented at the central side. After the voting date is fixed the user gets pop up notifications on the his or her android phone via GCM (Google Cloud Messaging). After that the user open the application then the face authentication is done at server side using the OTP. If the user is valid user then OTP is send to the user's mail address. Using OTP user opens the voting form then he or she casts their vote and then click on submit button and then logout. On the server side we can check the results. The GCM broadcasts the results notification to the user's device. The SQLite is the local database of the user's device. If his internet connection is down then the notification and other details gets stored on his local server. When user starts his internet connection then stored message are retrieved from the GCM that is the local database of the android phone.

**Keywords:** Short SMS Service(SMS), Google Cloud Messaging(GCM), SQLite .

## I. INTRODUCTION

The traditional approach is very time consuming as well as have more manual errors. The new approach eliminates the drawbacks of voting booths. Also the proposed system increases the performance of online voting system using android application. The system was proposed to eliminate the trouble of people to go and cast vote at the voting booth. Whenever schedule date notification via short message is get on user android device, the user can cast their vote from anywhere between the scheduled time. For casting the vote the user should be authorized so the projected system will done authentication of voter in very effectively manner. With the help of mobile camera projected system capture his/her face if current face is matched then authentication is done otherwise user is not able to cast their vote.

This projected system is based on face detection algorithm. During registration the projected system capture the user face which is used for the authentication process. The projected system will display the voting results on web application. Also advancement in android device is very easy and secure voting. The projected system provides the SRS for E-Voting using an Android platform.

### Paper-Based Voting –

Most of the voting organizations uses the paper to choose their favorite candidate through the traditional voting systems. This method has been used since long time especially before the advent of the internet. This method requires the presence of the person himself to the voting place and time specified and that stands in the booth and vote to choose one of the candidates in confidence and then put the paper in the ballot box. But this method have

several disadvantage for example the voters must present at the voting booth and wait in a queue to cast his vote and in some cases, the voter is being subjected to irritation by some officials. This method easily prone to scam and change the vote. Furthermore, it is very difficult to collect the ballot boxes and transported to the main center. This approach has high cost of process and time spent.

### Ballot-Based Voting –

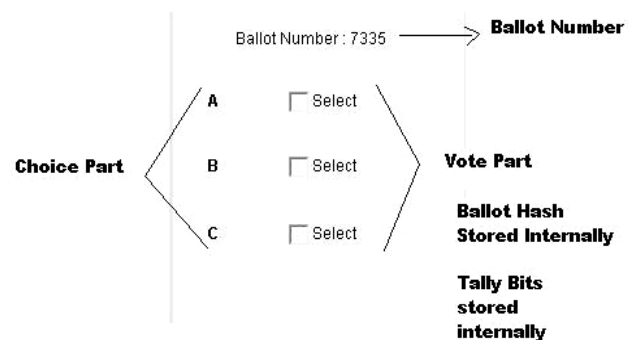
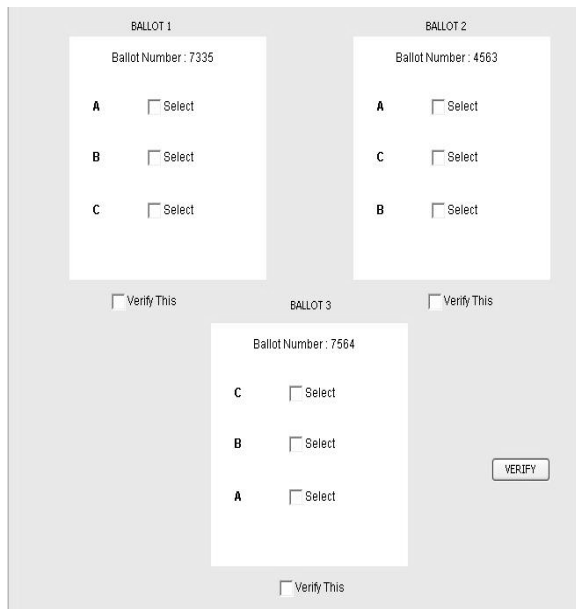


Fig. The Voting Ballot

In ballot based process of voting the different ballot servers generate a ballot each with unique ballot number and randomly generated choice list.

There are three ballot servers so that even if one of the ballot servers is not working properly then the other two can continue to work properly. Also this division of work ensures that the same ballot server is not generating all the ballots as it gives the ballot server chance to quietly manipulate ballots because the voter is then to vote from one of the ballots generated by the same ballot server and thus destroying doubt in the system.



**Fig. Ballot Verification**

**II. ELECTORAL SYSTEM IN INDIA**

The technology for voting used in India is Electronic voting machines [2]. There are two systems developed for conducting an electronic voting machine. These are the DRE (Direct Recording Electronic) and Identical Ballot Boxes. A DRE system records votes by using electronic display that are comes with the electronic components that can be activated by the user that task voter elect through computer program, and that records the processed voting data in a computer memory. DRE constructs a record of the voting data that is stored in the external memory component. The DRE system may also provide a means for forwarding the processed vote data to a central point in individual or accumulated forms for organizing and reporting results from limits at a central point.

**III. INTEGRATED ELECTION SOFTWARE PACKAGE**

Integrated Election Software package, running on a Microsoft Windows computer, allows the election official to set up and record the details of an election. When voting is completed, it counts the votes and displays the outcome of the count results in the format Irish voters are familiar with. The PC's used are stand alone and security hardened for the election software only. Access to the PC's is also controlled by a security key.

To make the voting process very simple and resourceful wireless and web technologies are used. The online-voting system has the possibility of secure, simple and secure way to take and count the votes in the election. The projected system provides the SRS for E-Voting using an Android platform. The E-voting means the voting process in election by using Android mobile phone. The android platform is used for developing an Online-voting application.

The projected system also described how to make the efficient use of the android mobile phones. The android

platform is used to develop a efficient & reliable application. Using the face-book API's provided by the android SDK (software development kit) the login can be done very efficiently & securely.

**IV. SYSTEM SPECIFICATIONS**

Android e-Voting application on smart phone user gives user to cast their vote. An application with an interface for discussion to a active web page offers the main question to be answered (voted), and together to this page are available the buttons to send their votes: Yes, No or Maybe. Administrator can see the results of voting according to vote options and city from which vote was done. The User can submit his opinion about given topic. We collect the information about audience poll on the specific topic. System can maintain the data about the voter like Name, Country, IMEI number and opinion about given topic. Even though the system enables voters to cast their votes from anyplace, firstly the voters should have to present their elector id number to verify themselves and set up their user-ids. This restriction is imposed to ensure that only the valid person is allowed to cast their votes in the elections. The aim of this work is to design and implement an electronic voting application for the Android platform that will enable people to vote securely from anywhere. The application as a whole is aimed at being compatible with devices from many manufacturers and running different versions of the operating system. The application is also aimed at being localized.

**V. EXISTING SYSTEM**

In existing system of voting, voter go on voting booth on the day of voting. There is no any centralized system, where we can cast our vote from remote location. There is no proper authentication present of an individual. There is manual work involved, so it may generate errors in the system. The Traditional approach is very time consuming and have got manual errors.

**Face Detection:**

In this algorithm, we are using eigen algorithm which will calculate the edges of input image and compare it with stored image in database. If match is found then it will authenticate the user.

**OTP sending on mail & SMS:**

System will generate one time password while registration which will be sent to input mail & SMS. Once user enter proper OTP generated the system will register the user.

**Display Results:**

In this module, we will cast our vote using android application and results will be calculated on web application.

**Through SMS:**

The user can vote by sending an SMS through the mobile connection to the voting system . For projected system the android application is created on android phone. The android system will implement some processes on the

SMS which is sent by the voters into the server through a network. The database is implemented on the server side which is used to send a result to the voter by using the android application as shown in above architecture.

The Android phone takes the image from the user and send it to the web service. The web service stores the image in the database. The web service executes the face detection algorithm which checks for Face validation. In this algorithm, we are using Laplace's face algorithm which will calculate the edges of input image and compare it with stored image in database. If match is found then it will authenticate the user for casting the vote. If the user is valid then it will send OTP message to its e- mail and mobile phone. Using this message the user will open the voting form. Then user will cast their vote. The results are declared at the server side on the web application. We are making an application that are based on Android Platform with face match algorithm for authentication. Only authenticated user can cast their vote on scheduling day by using an android application. Results will be displayed on the web application.

## VI. CONCLUSION

We have proposed the Online Voting System using face match Recognition. The projected system has provided an efficient way to cast votes, free of scam, and make the system more trustable, economic and fast.

The security is in terms of providing the one time password (OTP) and image. Basic aim of this project is reduce the manual work and time.

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