

Biometric Voter Authentication, Vote Casting and Counting & Ensuring Vote Verifiability in Electronic Voting System

A Project Report Submitted By

Serial No.	Name	Batch	Roll No.	Registration No.
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B.Sc. in Electrical, Electronic and Telecommunication Engineering

Department of Electrical, Electronic and Telecommunication Engineering (EETE)

Faculty of Science and Engineering

Dhaka International University

September 01, 2019

Biometric Voter Authentication, Vote Casting and Counting & Ensuring Vote Verifiability in Electronic Voting System

A Project is submitted to the Electrical, Electronics and Telecommunication Engineering (EETE), Faculty of Science and Engineering, Dhaka International University (DIU) in partial fulfillment of the requirements for the degree of Bachelor of Science in Electrical, Electronics and Telecommunication Engineering (B.Sc. in EETE).

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Declaration

This is to certify that the work presented in this project is the outcome of the investigation carried out by the following student under supervision of Mr. Tafsir Ahmed Khan, Lecturer in the department of Electrical, Electronics and Telecommunication Engineering (EETE), Faculty of Science & Engineering, Dhaka International University (DIU). It is also declared that neither of this paper nor any part has been submitted anywhere else for the award of any degree.

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Approval

The Project titled “**Biometric Voter Authentication, Vote Casting and Counting & Ensuring Vote Verifiability in Electronic Voting System**” has been submitted to the Faculty of Science & Engineering in partial fulfillment of the requirement for the degree of Bachelor of Electrical, Electronics and Telecommunication.

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Abstract

Electronic voting (also known as e-voting) is the most modern system for vote casting and counting in the world which uses electronic means to take care of casting and counting votes. Although there are lots of debate exists on the practicality of an electronic voting machine. This paper represents a design of an electronic voting machine which can authenticate real voters and take care of vote casting and counting. This particular model has lots of resemblance with some previously developed models hence this model of electronic voting machine has few unique features that justify the rebuilding. Ensuring verifiability of casted votes and privacy to some extent were the main focus of the project. This model requires voter's identification card to allow him/her to enter the pooling booth. Then the machine will authenticate the voter and check vote status for preventing multiple votes. If everything goes right then voter will be allowed to cast his/her vote. This machine will then generate a random vote reference number and show it for few seconds which will be sent to voter in his/her phone number via short message service after 48 hours. Detailed information will be written in a hidden MicroSD card which will be sent later to election commission for publishing. This random vote reference number will be needed to verify whether the vote is counted for the right candidate or not. The first portion of this report describes the historical background of e-voting whereas the last part illustrates the total building process along with methodology. This report is then concluded with few suggestions to improve. This device can reduce the cost of voting system & time to count votes manually and can provide improved accessibility. This is due to easy and cost effective integration of existing and upcoming technologies.

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