A Project Report on

"A SECURE SCHEME FOR USER AUTHENTICATION AND AUTHORIZATION"

A KSCST Student Project Programme Sponsored Project

Bachelor of Engineering In
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INTRODUCTION

1.1 Preamble

The way we live today is so much influenced by computing technologies. Computers control the economy, transportation, banking and many other functions. This development has made information attractive to criminals because of the economic value of such information. The advent of the Internet and wireless communication is believed to particularly have opened an entire new area of crime. The European cyber crime treaty has drawn a criminal policy aimed at protecting society against cyber crime by deterring and prosecuting actions directed against the confidentiality, integrity and availability of computer systems, communication networks and computer data. This indicates the extent to which authorities are getting prepared to fight cyber crime in society.

But the process of Security and Protection tradeoff is a continuous process so as computing became pervasive, people increasingly rely on public computers to do business over the Internet. Now, the Internet has become the preferred environment for a multitude of e-services: e-commerce, e-banking, e-voting, e-government, etc. Security for these applications is an important enabler. Accessing today‘s web based services invariably requires typing a username and password to authenticate. This is a significant vulnerability since the password can be captured by the public computer and later reused by the hostile party. So we need Two-Factor Authentication techniques to secure our web transactions.

Online banking requires strong user authentication. User authentication is often achieved by utilizing a two-factor authentication technique based on something the user knows, i.e., a static password, and something the user has, i.e., an OTP. The major advantage of involving a mobile phone is that most users already have mobile phones, and therefore no extra hardware token needs to be bought, deployed, or supported. The traditional system works by sending an OTP over an SMS to a user who wants to make an online transaction. We are not concerned with the additional security issues where legitimate users may attempt to increase their privilege (become super-users) or where insiders with physical access to the computers attempt to gain improper access.Data, including authentication information such as passwords, are carried on a variety of networks including LANS and private or public data and voice networks.