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Secured Bank Authentication Using Geo-Location Based System

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Abstract— Authentication, authorization and accounting are the most important issues of security on data communication. In particular, authentication is the life of every individual essential closest friend. The user authentication privacy is dependent on the strength of the security provided by the system. Today's network environment is full of dangerous attackers, hackers, crackers, and spammers. Authentication, authorization and accounting are the most important issues of security on data communication. In this system we propose a new Geo-location based authentication protocol to solve this problem. we are providing the authentication according to the location of the client .Using GPS we are going to find out the location of the user and according to location of the user they will be allow to login into the system. Then also provide security from the textual password attack we are using the share algorithm to create share and use it next step of the authentication. Our authentication server only needs to store only a secret key for decryption instead of large password database.

Keywords— GPS, LBS, Authentication

I. INTRODUCTION

In traditional banking procedure there is a problem of forgery during transactions .In online banking, security begins with the authentication process, used to assure that it is you, and not someone who has stolen your identity .In this system we are going to use GPS(Global Positioning System) for tracking location. Using GPS we are going to find out the location of the user and according to location of the user they will be allow to login into the system .Then also provide security from the textual password attack we are using the share algorithm to create share and use it next step of the authentication. In sharing algorithm signature of the applicant is processed in such a way that, signature is taken as input and is divided into different number of shares depending upon the banks scheme. One share is preserved in the bank database and all other shares are given to the user. The user need to provide his shares during every transaction and those shares are over lapped with the already existing bank shares and a check for authentication will be done by using correlation technique. If a higher correlation coefficient is achieved, then the authentication is successful [1].

II. LITERATURE SURVEY

K.Semmangaiselvi,T.Vamsidhar proposes that the authentication security can beincreased, but sometime the passwords seem to remain dominant due to the drawbacks of reliability, security, or cost of other techniques. Biometric techniques make use of physiological or behavioral characteristics to be their identities. Verification may be secure, but it still needs to resolve the security usability and balance for general usage [2].

Moulisai Rachagundla proposes that traditionally we used textual password for authentication.Like we used in Facebook, Gmail, And all other application Textual passwords enjoy widespread used because they are easy to remember and are cheap to implement.They suffer from what is known as the password problem. The easy to use and remember but at the same time password should be random and hard to guess [3].

Vidya Mhaske proposes that the 3-D password is a multifactor authentication scheme. For authentication, we present a 3- D virtual environment where the user navigates and interacts with various objects [4].

Syed Gulam Gouse proposes that existing system provides a concrete security level, which is same for all applicants and the applications. It sets the threshold value as a fixed one whose size cannot be changed. In the proposed system the size of the threshold value is set by the applicant, depending upon his/her current need, with the help of dynamic applicant blocks.

III. PROBLEM DEFINITION

With the rapid development of information technology, the need of various types of information services has emerged. Among them the location based applications are of the ulmost importance.In online banking system, to make secure transaction and to

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protect our system or account against unauthorized access it is very important to track the location of a user who is accessing the perticular account. In this system we are going to use GPS(Global Positioning System) for tracking location. Using GPS we are going to find out the location of the user and according to location of the user they will be allow to login into the system. Then also provide security from the textual password attack we are using the share algorithm to create share and use it next step of the authentication.

IV. ARCHITECTURE

The algorithm mainly deals with Image Processing and Visual Cryptography. Signature of the user is processed in such a way that, signature is taken as input and is divided into different number of shares depending upon the banks scheme. One share is preserved in the bank database and all other shares are given to the user. The user need to provide his shares during every transaction and those shares are over lapped with the already existing bank shares and a check for authentication will be done by using correlation technique. If a higher correlation coefficient is achieved, then the verification is succeeded[1].

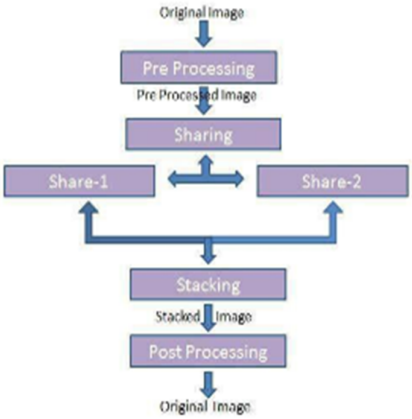


Figure.1. Sharing Algorithm

A. *Architecture Module*

Find The Location From where user access the application using GPS device.
The user location is match each time when want to access system.
Allow to access system from specified location only using the share provided by the bank.
Instead of using textual password we will use sharing algorithm on image/sign for authentication purpose.

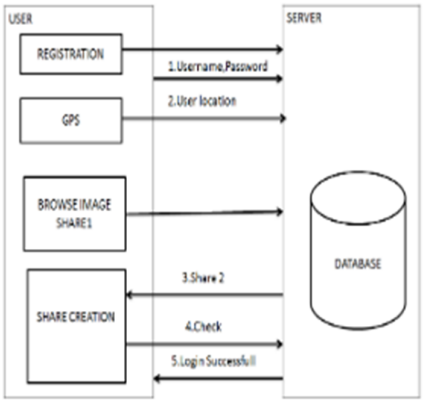


Figure.2.Architecture Module

IV. PLATFORM

Front End: Java.

Back End: Oracle 10g.

V. ADVANTAGES

More secure system
Scalable system
Provide new location based access to system.
Prevent outsider attacks.
Prevent from dictionary attacks.
Human driven
Adding people into the system becomes very easy.

VI. DISADVANTAGES

Implementation is Slightly Harder.
Large Database Has to be Maintained.

VII. CONCLUSION

We proposed an effective technique to provide greater security in the field of core- banking and internet banking applications. At the beginning, while creating an account the bank, location and signature of the applicant is taken by scanning his/her signature from the application.Now this scanned image is taken as input and is subjected to pre-processing to remove noise and to increase intensity.This pre-processed image to encrypted into two share by using two out of two scheme.One share is stored in the bank database, another share is printed and given to the applicant. Applicant had to provide his share during every transaction.Then according to the user location tracking using GPS allow user to access system.

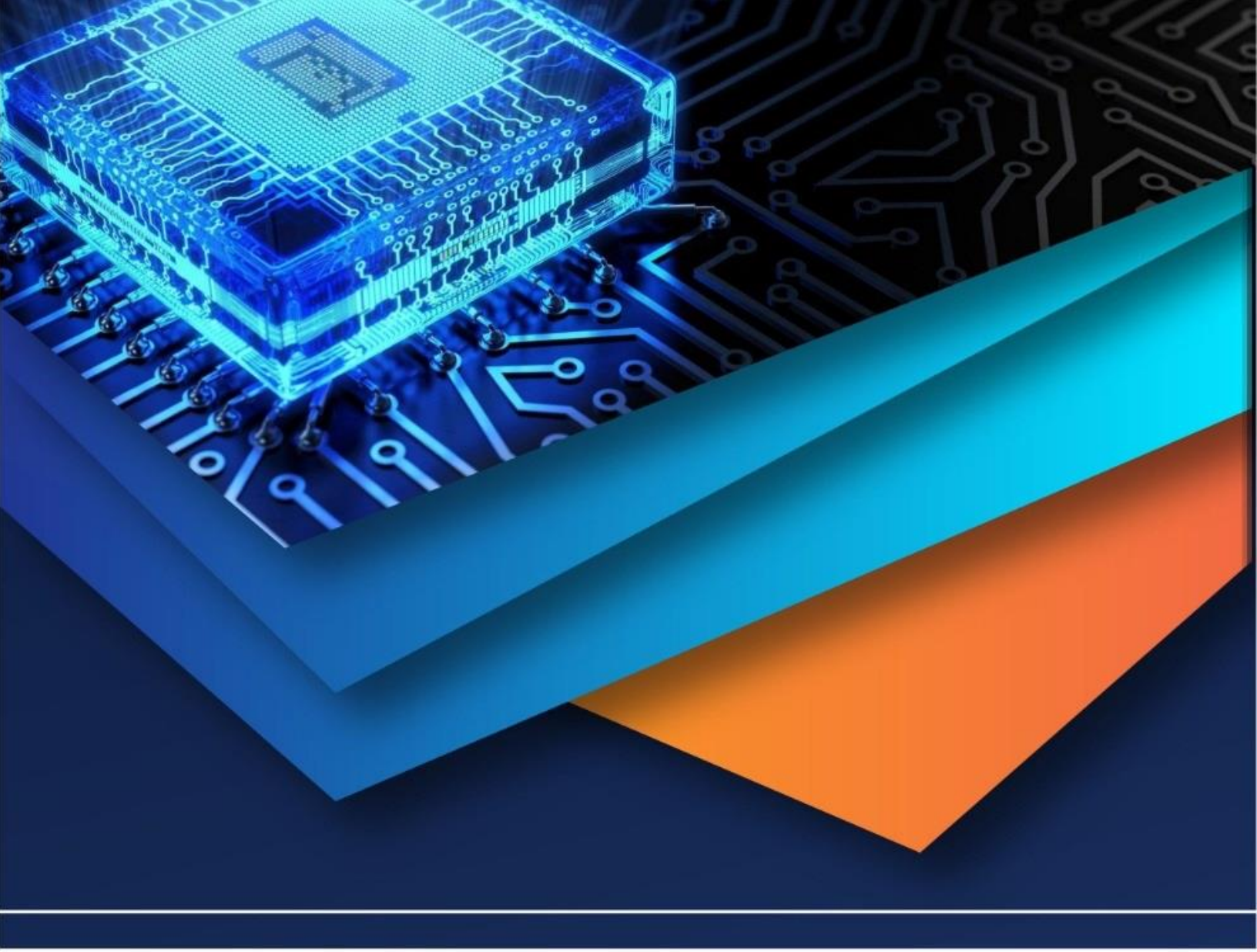
VIII. ACKNOWLEDGMENT & FUTURE SCOPE

There is no system available which can provide access according to location,this system is much more secure but try to develop a more secure system.Improve the user flexibility

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