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GRAPHICAL CODE WORD-AUTHENTICATION USING NET BANKING

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ABSTRACT- Multimedia data has become a major data type in the Big Data era. The explosive volume of such data and the increasing real-time requirement to retrieve useful information from it have put significant pressure in processing such data in a timely fashion. Secret Word is an attempt by an individual or a group to thieve personal confidential information such as passwords for identity theft, financial gain and other fraudulent activities. In this paper we have proposed a new approach named as "GRAPHICAL CODE WORD-AUTHENTICATION USING NET BANKING" to solve the problem of sensitive information. Users often create memorable passwords that are easy for attackers to guess, but strong system-assigned passwords are difficult for users to remember. So researcher of modern days has gone for alternative methods wherein graphical pictures are used as passwords. Graphical passwords essentially use images or representation of images as passwords. Human brain is good in remembering picture than textual character.Here an image based authentication using in visual view is used. The use of visual is explored to preserve the privacy of image Captcha as Graphical Password (CaRP). Herein, we propose generating CAPTCHAs through random field simulation and give a novel, effective and efficient algorithm to do so. This results in a CAPTCHA, which is unrecognizable to modern optical character recognition but is recognized about 95% of the time in a human readability study.

Keyword - Image processing, Captcha, Usability, Markov random field, security, simulation, statistical information compression.

I. INTRODUCTION

Multimedia data, such as images and videos, have become one of the major types. A CAPTCHA is a "Completely Automated Public Turing test to tell Computers and Humans Apart". [1], The text-based captcha is the most commonly deployed type in websites, such as *Gmail, eBay,* and *Facebook,* to date, with many advantages. [2], widely used to protect online resources from abuse by automated agents. Von Ahn *et al.* A common CAPTCHA is an image of (usually alphanumeric) characters to that are easy to identify by English-reading humans yet translate into the hard AI problem of optical character recognition (OCR). Segmentation of

characters within a word image is error prone and continues to be difficult for contemporary. [3] That the hard artificial intelligence (AI) problems form the test basis and defines a *(α, β, η)-CAPTCHA* as a test that 1 can be solved by at least *α* proportion of humans (e.g., the English-speaking adult portion) with a probability of success greater than *β;* 2) if a computer program can solve it with probability greater than *η* in fixed time, then the program can be used to solve the hard AI problem (see [3] for details). Therefore, segmentation should be hard to ensure an OCR-algorithm based CAPTCHA is resistant to computer programs. [4] The random fields with given pixel arginal probabilities and pixel-pixel correlations, which are estimated from a priori samples with random variations in the fonts and placement of letters. [5] An effective *(α, β, η)-CAPTCHA, β* should be high a*η* should be low. The target population for our KNWCAPTCHAs is English-readers with better than 20/60 vision. We establish high *β* via a readability study and endorse low *η* via experiments with modern OCR programs.

Fig. 1 Few Examples for CAPTCHA . (a) Scatter Type. (b)

(c)   (d)

The KNW-CAPTCHA is used to investigate how the generation parameters (especially the

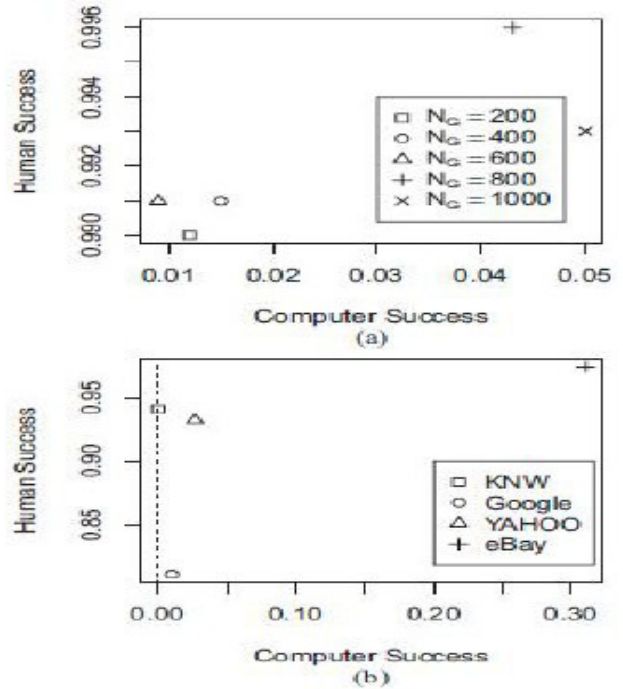number of Gibbs iterations, *NG)* affect the attack resistance of the resulting CAPTCH.

(a)

(b)

Figure 2a shows both the attack resistance and human readability of the KNW-CAPTCHAE for various values of *NG,* where computer success is the proportion of CAPTCHAs where either of the OCR programs Tesseract or ABBYY Fine Reader successfully recognized it, and human success is the proportion of CAPTCHAs where a human successfully recognized it. [6] The KNW-CAPTCHAH would be used in practice as the background noise provides additional security but the CAPTCHA remains highly readable to humans. Figure 2b compares the human readability and attack resistance of the KNW-CAPTCHAH with several CAPTCHAs deployed by major corporations. As the correct

answers for the comparison CAPTCHAs are unknown, we use optimistic solving accuracy (see Section IV-D) to determine human success; similarly, an OCR program is considered correct if it matches any of the human responses.

II. LITERATURE SURVEY

Design is the first step in the development phase for any engineered product or system. The designer's goal is to produce a model or representation of an entity that will later be built. Beginning, once system requirement has been specified and analyzed, system design is the first of the three technical activities -design, code and test that is required to build and verify software. It is a process of converting a relation to a standard form. [7] The process is used to handle the problems that can arise due to data redundancy, i.e. repetition of data in the database, maintain data integrity as well as handling problems that can arise due to insertion, updating, deletion anomalies. [8] Fraser Newton received the B.Sc. degree in computing science and the M.Sc. University of Alberta, Edmonton, AB, Canada, in 2005 and 2012, respectively. He is currently a Senior Software Developer with Clio, where he is involved in research on software and statistics of Web development. He was a Developer with Random Knowledge Inc., Edmonton, from 2005 to 2008, where he had developed a passion for probability, estimation, and prediction. [9] Biao Wu received the B.A. degree in mathematics from Southwest Normal University, Chongqing, China, and the M.S. degree in economics from Renmin University of China, Beijing, China, in 1994 and 1997, respectively, and the Ph.D. degree in probability and stochastic processes with Carleton University, Ottawa, ON, Canada, in 2005. He is currently the Manager of Parameter Validation, Group Risk Management, Royal Bank of Canada. He was a Post-Doctoral Fellow with the Department of Mathematical and Statistical Sciences, University of Alberta, Edmonton, AB, Canada, from 2007 to 2009. [10] In existing is the concept of image processing is improved visual image is used. Image processing is a technique of processing an input image and to get the output as either improved form of the same image and/or characteristics of the input image

Disadvantages Of Existing System

- Analyses on Captcha security were mostly case by case or used an approximate process. No theoretic security model has been established yet.
- Even though, those passwords traditionally considered strong with combination of letters, numbers and symbols are at risk.

III. PROPOSED SYSTEM

CaRP is click-based graphical passwords, where a sequence of clicks on an image password Innovative safety proposes the IMAGE Based Authentication System, which is designed to avoid the problems that are faced by the existing password authentication systems. Graphical passwords essentially use images or representation of images as passwords. . The major goal of this work is to reduce the guessing attacks as well as encouraging users to select more random, and difficult passwords to guess. This is because humans are far better at recognizing images that they have previously seen than they are at remembering passwords. Human brain is good in remembering picture than textual character.

Advantages Of Proposed System

- CaRP also offers protection against relay attacks, an increasing threat to bypass Captchas protection.

- Captcha can be circumvented through relay attacks whereby Captcha challenges are relayed to human solvers, whose answers are fed back to the targeted application.

- The users are directed to Cued Click point selection only if they choose correct Coordinates. Hence it cannot be guessed and strengthens the security.
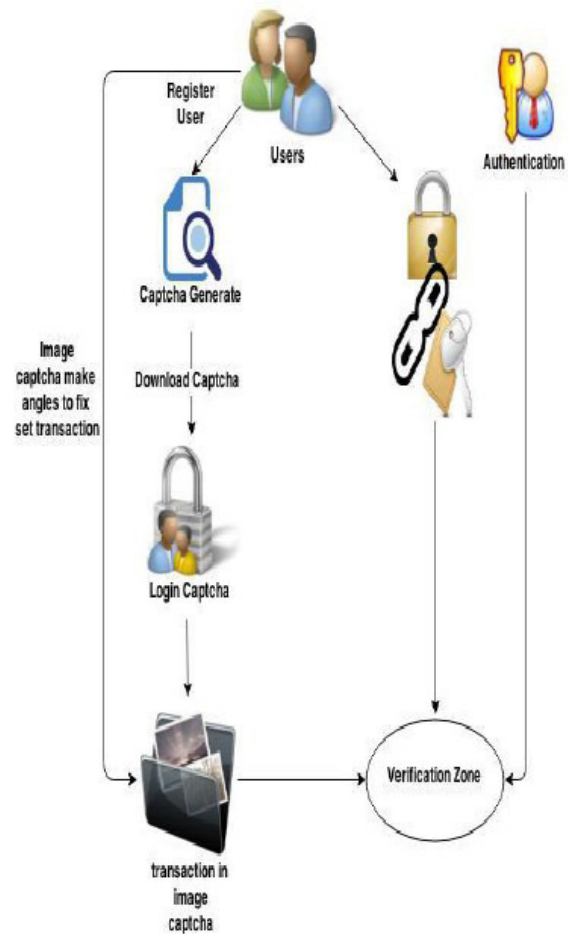
IV. SYSTEM ARCHITECTURE

Fig 3. Overall System Architecture

The modules involved in this system are:

- Login Page
- Graphical Password
- Captcha in Authentication
- Transaction Security

Login page:

Existing analyses on Captcha security were mostly case by case or used an approximate process. No theoretic security model has been established yet. Object segmentation is considered as a computationally expensive, combinatorially-hard problem, which modern text Captcha schemes rely on to generate captcha.

Graphical Password:

In this module, Users are having authentication and security to access the detail which is presented in the Image system. Before accessing or searching the details user should have the account in that otherwise they should register first.

Captcha in Authentication:

It was introduced in use both Captcha and password in a user authentication protocol, which we call *Captcha-as graphical Password (CaPA) protocol,* to counter online dictionary attacks. The CaRA-protocol in requires solving a Captcha challenge after inputting a valid pair of user ID and password unless a valid browser cookie is received. For an invalid pair of user ID and password, the user has a certain probability to solve a Captcha challenge before being denied access.

Transaction security:

Image captcha ,in which the images that are generated to fix security purpose,where click to fix axis for(angles) transaction in security primitive .

V. RESULT

ADO.NET is an evolution of the ADO data access model that directly addresses user requirements for developing scalable applications. It was designed specifically for the web with scalability, statelessness, and XML in mind. The Microsoft .NET Platform currently offers built-in support for three languages: C#, Visual Basic, and Java Script.
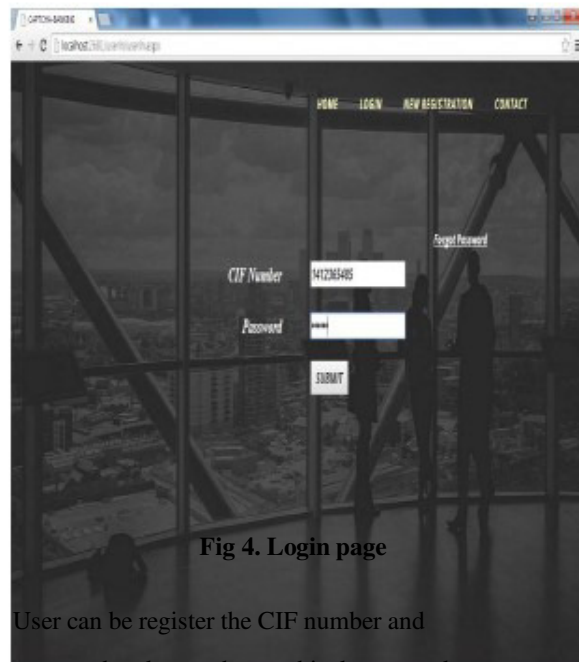

Fig 4. Login page

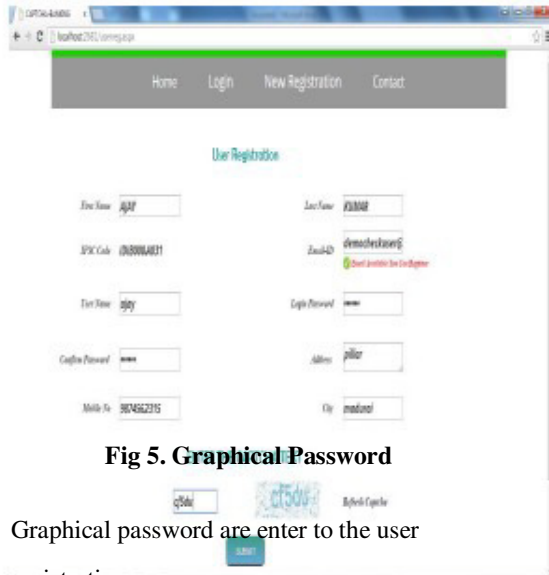User can be register the CIF number and password and go to the graphical password.

Fig 5. Graphical Password

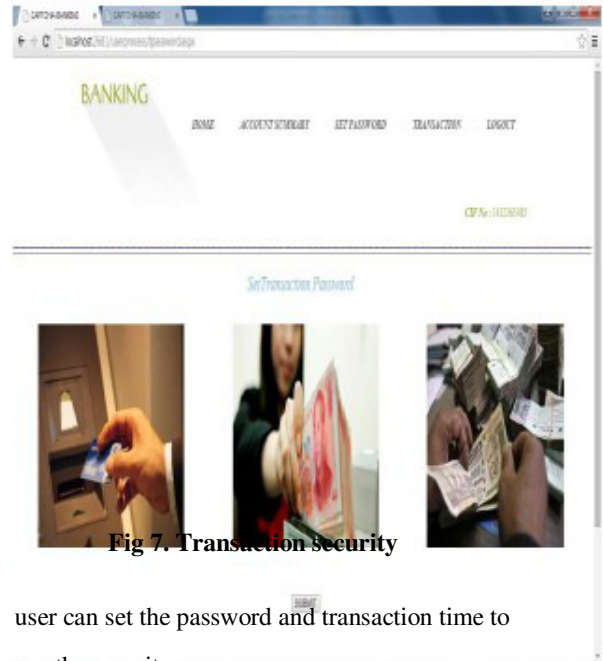Graphical password are enter to the user registration.

Fig 6. Captcha in Authentication

Now the user can register with the mail id. Then the download captcha and upload.

Fig 7. Transaction security

user can set the password and transaction time to use the security.

VI. CONCLUSION AND FUTURE ENHANCEMENT

We developed and implemented a new method of generating random CAPTCHAs, called KNW-CAPTCHAs, using random field simulation that outperforms popular CAPTCHAs in use today. And established that the KNW CAPTCHA is an effective separator of computer programs and humans. The colors used for the background noise and the CAPTCHA could change from left to right; or the amount of noise could be increased or decreased vertically.

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