



## CAPTCHA FOR SECURITY IN WWW

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**Abstract**—The internet BOT or web robot is one of the most spiteful threats to the web services. The WWW robot or simply BOT. That is a software application that runs automated tasks over the internet and creates problem. One solution for securing web from BOT is to develop CAPTCHA. CAPTCHA is acronym for Completely Automated Public Turing test to tell Computers and Humans Apart. CAPTCHA may be in the form of text or image.

**Keywords**— CAPTCHA, Security

### I. INTRODUCTION

CAPTCHA stands for Completely Automated Public Turing Test to Tell Computer and Human Apart that defends websites against BOTs by generating and grading tests that humans can pass but a computer program cannot. A corrupted text can be readable by Humans, but current computer programs can't. For many years, CAPTCHAs [2] have proven very useful for many reputable Web-based email and application service providers, online auction sites, social networking sites for the purpose of identifying automated registration. And has found widespread application on numerous commercial web sites including Microsoft MSN, Google and Yahoo. It is accepted that a good CAPTCHA must be usable and robust. The robustness of a CAPTCHA is its strength in defending adversarial attacks, and this has attracted important attention in the research community.

There are the following three main types of CAPTCHAs:

- 1) **Text-based schemes** – These are typically rely on impure distortion of text images rendering them unrecognizable to the state of the art of pattern recognition programs but recognizable to human eyes.
- 2) **Audio -based schemes**- These are typically need the users to solve a speech recognition job.
- 3) **Image-based schemes**- These are typically require the users to recognize an image.
- 4) **The Standard Distorted Word CAPTCHA with an Audio Option** - This comes from the most popular CAPTCHA company out there, ReCAPTCHA.
- 5) **3D Captcha** - This one may be one of the more difficult ones to solve, but it is sure to keep out robotic predators.
- 6) **Math Solving Captcha** - If your users can't solve these basic math problems then maybe you don't want them commenting on your threads anyways. These provide you with easy to read numbers that must be added in order to get past the CAPTCHA.

The main aim of a CAPTCHA is to resist form submissions from BOTs – automated scripts that get email addresses from the web forms. Many CAPTCHA's are very weak and that can be solved by cleaning the image and using simple OCR. Here are some examples CAPTCHA images in Fig 1.

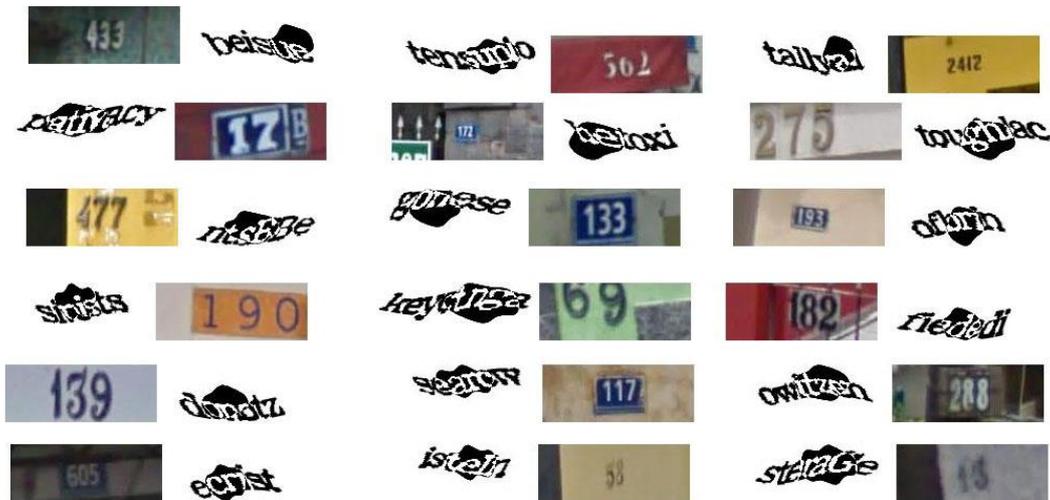


Fig. 1 Formats of CAPTCHA

CAPTCHA images can be passed by an OCR program to extract the text. In the Fig. 2 the distracting marks are lighter and the actual text is achieved.

## II. PROPOSED SYSTEM

In order to enhance the security in web based applications, application of various types of CAPTCHAs on the client side in web application is future. Showing the drawbacks of Text CAPTCHAs & Auditory CAPTCHAs implementation of Image-Recognition-Based CAPTCHAs is future. The Text-CAPTCHAs and Audio-CAPTCHAs can be cracked by various methods like using OCR or any browser-add on softwares communicating with its server. The screen showing the CAPTCHA will ask user to click on the specific CAPTCHA and this will continue for 4-5 times and if and only if all the clicks are made correct then he will be allowed to access the applications. Fig. 3 illustrates the Image Recognition Based CAPTCHA.

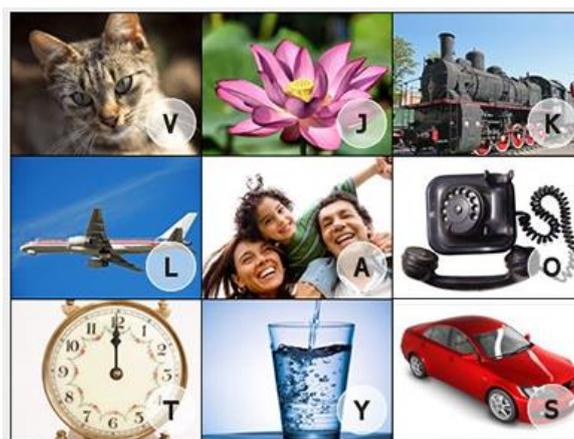


Fig. 3 IMAGE CAPTCHA

### III. CONCLUSIONS

This proposed system is providing a new way of using CAPTCHA to get better security on web applications. There are also some types of CAPTCHAs like Text CAPTCHA, Audio CAPTCHAs etc. There is a Better scope to work on this system.

### REFERENCES

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