

## **IMPROVING SECURITY THROUGH IMAGE BASED USER AUTHENTICATION**

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### **Abstract**

The computer and communication systems depend largely on passwords to identify and authenticate users. Typically, passwords are strings of characters and digits. Alphanumeric passwords are convoluted to remember for users because a safe password should be long and arbitrary, however users pick short, simple, and insecure passwords. Image passwords have been proposed to aim to make passwords more memorable and easier for users to use and, for this reason, it is more secure. In this paper, we present an alternative user authentication based on Image authentication scheme. We have design and implemented a method that uses a strengthened cryptographic hash function to compute fast and secure passwords for arbitrarily many accounts while requiring the user to memorize only few memorable points in the image. Our design is both highly resistant to brute force attacks and prone to Dictionary attack, allowing users to retrieve their passwords from any location so long as they can execute our program and remember a short secret. This combination of security and usability will attract users to adopt our scheme.

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**Keyword:** Image Password, User Authentication, Graphical Password, Memorability, Security and usability.