Highly Secure Authentication Scheme

Abstract

The increased level of effective security control and transaction fraud in the world of electronic and internet commerce, demands for highly secured identification and personal verification systems. The Knowledge based authentication system encourage to user in selecting password for high security. For high security application the proposed scheme presents an integrated evaluation of the graphical password scheme by using persuasive cued click points, including usability and security evaluations, and implementation considerations along with the biometric authentication using finger nail plate surface. It implements the graphical passwords scheme to improvise the difficulty level of guessing it along with the biometric authentication which is very convenient and efficient method by acquiring low resolution images of nail plate surface which is the outermost part of the nail unit. The contour and texture characteristics of nail plates from three fingers (Index, Middle and Ring) are represented by the appearance and shape based feature descriptors. To implement these we use the technique of score level rules for fusion and classifier based fusion of matching scores by employing decision tree and support vector machine. The objective is to provide highly secure authentication scheme by using user name with graphical password using persuasive cued click points along with biometric authentication using finger nail plate. The scope of the scheme is limited to three fingers only and also for high security purpose where it is very important to keep tight security
like military application, forensic labs, civilian, banking applications, etc.

References

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Index Terms

Computer Science  Security

Keywords

Biometric Authentication  Graphical Password  Finger Nail Plate  security
Persuasive Cued Click-Points.