Abstract

The most common account based password used for authentication is Textual passwords. But Textual passwords are in risk to phishing attack, burette force attack, social engineering and shoulder surfing. Biometrics is used for human recognition which consists of authentication, verification and recognition. Biometric passwords are introduced as alternative techniques to textual passwords. Many biometric systems exist today by using fingerprint, face, iris, etc but risk to duplicating a fake (For e. g. :- "fingerprint-gummy finger"). Palm vein authentication is one of the modern biometric techniques, which employs the vein pattern in the human palm to verify the person. The merits of palm vein on classical biometric (e. g. fingerprint, iris, face) are a low risk of falsification, difficulty of duplicated and stability. In this propose method, detecting a hand vein by using Near Infrared (NIR) Light method for web based account. A CCD camera will capture the image of person’s palm vein region. The captured image will process through Mat lab software and emphasize to get vein structure. The detected palm vein structure which acts as a password for web based account for password security.
Hand Vein Detection using Infrared Light for Web based Account


- J. Galbally, J. Fierrez, F. Alonso-Fernandez and M. Martinez-Diaz &quot;Evaluation of direct attacks to fingerprint verification systems&quot; Published online: 26 May 2010 © Springer Science+Business Media, LLC 2010.


- Yingbo Zhou, Ajay Kumar, Senior member of IEEE, &quot;Human identification using palm vein images&quot;, IEEE transactions on information forensics and security, vol. 6, no. 4 (2011)


Boston/Dordrecht/london


- &quot;Palm Vein Pattern Authentication Technology&quot;, Fujitsu white paper, 2005.

- Hao luo,Fa-Xin Yu,Jeng-Shyang Pan,Shu-Chuan Chu and Pei-Wei Tsai, &quot;A Survey of Vein Recognition Techniques&quot;, information technology Journal, vol. 9, no6, pp.
Hand Vein Detection using Infrared Light for Web based Account

- Yingbo Zhou and Ajay Kumar, "Contactless Palm Vein Identification using Multiple Representations", in 4th IEEE international conference on biometrics: Theory applications and systems (BTAS), pp. 1-6, September2010

Index Terms
Computer Science
Security

Keywords
Biometric Near- Infrared Image Normalization Binarization Filtering Image segmentation
Pattern Thinning
Matching.