

Retinal Biometry - An Armor for Cybercrime in Indian Banking Industry.

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Abstract: Indian banking industry showed a remarkable development with respect to the customer service by implementing the idea of automated teller machine in early nineteenth century. Consumers are delighted with this advent as banking transactions became convenient. However the cost related to transactions are high in ATM. consumers adore this activity as it conserves time in their busy schedule and reduces visits to the banks. Innovations and inventions were penetrating the banking industry and finally banking at the finger tips was possible irrespective of the location and time. Internet banking was an effective gizmo in late nineteenth century. Other than banking transactions the facility of payments of utility bills is also possible at the convenient cost. The revolution in science always emanates with blessings and curses. Allocating the unique identification number was not sufficient to maintain the confidentiality of consumers. Hacking password and false text messages victimized the consumers of cybercrime. Fraudulent activity of hackers reduced balance of the savings as well as current accounts to zero in just few minutes. Banking industry needs a fence to safeguard the confidentiality and retain the consumers. The study emphasizes on the retinal biometry as an effective tool to subside the cybercrimes associated with banking segment. Banks should take an initiative to implement this activity as it will preserve the trust and secrecy of the consumers.

Keywords: Retinal biometry, cybercrime, Indian multinational banks.

Introduction:

The inception of retinal perusing was in late nineteenth century. It is among the most accepted and adorable biometric technologies. The vessels located in the interiors of retina captivates the rays of light more easily compared to any tissue. The images are also identified easily in adequate amount of light. Activity of scanning is carried out by penetrating the rays of light having shorter wave length in consumer eyes through an eyepiece. As soon as instrument seizes the image of the retina it is converted in to prototype. Verifications is successful only if the image is of superior grade. This unique feature compels retinal scanning as an effective tool for identification. The remarkable feature of the obtaining the excellent quality image can also be its disadvantage, as probability of unsuccessful identification occurs due to any technical deformity. Although the process of scanning is time consuming but once the consumer is well versed with the protocol it will take seconds to complete the same. The retinal scanners are used by the legislative authorities especially in the province of armor and several sections of investigation.

Several companies enrolled in the business of communication loaded the application of iris scanning in their cell phones. However if the accuracy is compared retina scans are more precise than iris and any other methods of scanning. The minimum time required for the consumer to obtain a perfect image is not more than 15 seconds. Cybercrime is an illegal activity that active involvement of the computers is mandatory. Dr.

Debarati Halder and Dr. K Jaishankar describes cybercrime as “Illegal activity performed by an individual or groups with an objective and intention to tarnish the status of victim and harm him emotionally by taking the help of internet. Those illegal activity portend the pecuniary status of sovereign. The repute of the multinational bank is also at stake as consumers are high profile.

Genesis: Retina as a mode for the personal identification was put forward by Dr. Carleton Simon and Dr. Isadore Goldstein at United States of America in mid of nineteenth century. However the concept was introduced quite prior to nineteenth century. Slowly gradually a decade down the line instruments to carry out the biometry were available in the market. Robert hill established an institution to perform the research activities for upgrading the instrument with the latest technology.

Literature review

- 1) The term “Biometrics” is derived from the Greek words “bio” (life) and “metrics” (to measure) (Rood and Hornak, 2008).
- 2) Rowley says, “Most insecure is a magnetic stripe with a PIN, more secure is a smart card with a PIN, and even more secure is a smart card with biometrics”
- 3) A.B. J. Teoh et.al, in proposed a biometrics formulation which is based on the concealment of random kernel and the iris images to synthesize minimum average correlation energy (MACE) filter for iris authentication. Particularly, the

training images are multiplied with the user - specific random kernel in frequency domain before biometric filter is created. The main aim of the proposed technique is to provide private biometrics realization in iris authentication in which biometric template can be reissued once it was compromised. Meanwhile, the proposed method is able to decrease the computational load, due to the filter size reduction

Advantages of retinal biometry:

Probability of false image is less.

Trustworthy: retinal images are not identical in two different people

Results are obtained in very less span of time

Disadvantages of retinal biometry:

The accuracy of the images can deviate if the consumers suffers optical ailments

Protocol of the scanning is not followed.

Highly expensive.

Installation of technology is expensive

Significance of Retinal Biometry:

The feature of obtaining the accurate image has created a wide scope for the application of retinal biometry in several industries. The application is important in provinces where personal identification is critical to avail the facilities provided by the institution. Internet banking a globally adorable service provided by the banks for the consumers to carry out the banking activity and other necessary transactions is facing challenges. The increasing numbers of the customer grievances with reference to hacking of the identification number compels the multinational banks to find out a solution for the same. Retinal biometry is an optimal solution in the banking sector.

References:

ALLAN, A.,Biometric Authentication. Perspective. Gartner Research, 2002a: p. 1-31.
Prabhakar, S., S. Pankanti, and A.K. Jain, Biometrics Recognition: Security and Privacy Concerns. IEEE Security & Privacy, 2003.1(2): p. 33-42.
Wayman, J.L. and L. Alyea, Picking the Best Biometric for Your Applications, in National Biometric Test Center Collected Works. 2000, National Biometric Test Center: San Jose. p. 269-275.
Zhang, D.,Automated Biometrics: Technologies and Systems 2000, Norwell, MA: Kluwer Academic Publishers Pg 331-332.

Vitality in business:

Banking segment driven by the customers' needs to focus on the security of their consumers. More than ninety percent of the business is contributed by HNI's hence

maintaining the confidentiality of the high networth individuals is prime responsibility of the banks. Retinal biometry palisade the risk of cybercrime and retention of consumers is possible. Consequently the revenue is generated by winning the trust of consumers.

Role of Retinal biometric in risk Management:

The risk of the transaction and pilfering the identification code is subsided to a large extent by implementing the application of retinal biometry.

Brand image:

Maximum number of grievances subsides the image of the bank. The primary focus to maintain the strong bonding between the consumers and bank is very essential. The prompt service with less number of complaints is a pathway to establish a brand in the province. Retinal biometry is an effective tool to establish a brand image.

Conclusion:

The overall study of retinal biometry reflects its significance in the Indian banking scenario. Internet banking has become a part of day to day activities of the consumers. Hence to maintain secrecy of the data is a prime responsibility and is a challenge for the Indian multinational banks. Retinal biometry is a tool to subside the illegal activities and eventually result in reducing the crime rate. Hence Indian multinational banks should focus on the technology of retinal biometry to avoid customer migration