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Offline OTP Based Solution for Secure Internet Banking Access

(Conference Paper)

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Abstract

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Numerous applications are available on the Internet for the exchange of personal information and money. All these applications need to authenticate the users to confirm their legitimacy. Currently, the most commonly employed credentials include static passwords. But people tend to behave carelessly in choosing their passwords to avoid the burden of memorizing complex passwords. Such frail password habits are a severe threat to the various services available online especially electronic banking or e- banking . For eradicating the necessity of creating and managing passwords, a variety of solutions are prevalent, the traditional ones being the usage of One- Time-Password (OTP) that refers to a single session/transaction password. However, a majority of the OTP - based security solutions fail to satisfy the usability or scalability requirements and are quite vulnerable owing to their reliance on multiple communication channels. In this study, the most reliable and adoptable solution which provides better security in online banking transactions is proposed. This is an initiative to eradicate the dependency on Global System for Mobile communication (GSM) that is the most popular means of sending the One- Time-Passwords to the users availing e- banking facilities. © 2018 IEEE.

Author keywords

Authentication | E- banking | OTP | Security | SMS

Indexed keywords

Engineering controlled terms: Chaos theory | E-learning | Electronic commerce | Global system for mobile communications | Samarium

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