



A NEW FINGERPRINT BIOMETRIC REMOTE USER AUTHENTICATION SCHEME USING CHAOTIC HASH FUNCTION ON MOBILE DEVICES

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ABSTRACT—A remote user authentication is a mechanism to authenticate remote users over insecure communication networks. It is evident that, with the passage of time, the volume of mobile user authentication is increasing because of the ease in accessing resources from any remote location. In 2008, Khan et al. proposed an efficient and practical chaotic hash-based fingerprint biometric remote user authentication scheme for mobile devices. The current paper, however, demonstrates that Khan et al.'s scheme is vulnerable to a privileged insider's attack and impersonation attacks by using lost or stolen mobile devices. In order to isolate such problems, the current paper also presents an improved remote user authentication scheme based on Khan et al.'s scheme.