



A NOVEL TRI-FACTOR MUTUAL AUTHENTICATION WITH BIOMETRICS FOR WIRELESS BODY SENSOR NETWORKS IN HEALTHCARE APPLICATIONS

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Abstract - User authentication, as a fundamental security protocol, has been addressed with more concerns recently. Unlike normal authentication processes invoked by a user to access the network, biosensors with healthcare applications normally need to be validated automatically, followed by data transmission to the remote server without any explicit request. Hence, implied authentication procedure involved in such application scenarios shall be addressed. In this paper, a novel tri-factor user authentication protocol with mutual access is proposed for the body sensor networks

(BSN) in healthcare application. It is demonstrated that the proposed protocol has its advantages over the existing two-factor user authentication schemes.

Index terms: BSN, Biosensor, Mutual Authentication, Security, Pattern Vector.