**Smart card with iris recognition for high security access environment**

**ABSTRACT**

Smart cards are increasingly being used as a form of identification and authentication. One inherent problem with smart cards, however, is the possibility of loss or theft. Current options for securing smart cards against unauthorized use are primarily restricted to passwords. Passwords are easy enough for others to steal so that they do not offer sufficient protection. This has promoted interest in biometric identification methods, including iris recognition. The iris is, due to its unique biological properties, exceptionally suited for identification. It is protected from the environment, stable over time, unique in shape and contains a high amount of discriminating information. This paper proposes a method to integrate iris recognition with the smart card to develop a high security access environment. An iris recognition system and smart card programming circuit with its software have been designed. Template on card (TOC) category has been employed. Hence, the extracted iris features stored in smart card are compared against the data acquired from a camera or database for authentication. The proposed algorithm has superior performance in terms of security, accuracy and consistency compared with other published technology.

***Keywords-*** Iris recognition; Wavelets; biometrics; smart card.