

**Electronic access key based on innovative Information Fusion technique  
involving prime numbers and biometric data**

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**Abstract**

This study shows an innovative system to create an access key which can be used within the field of computer security, and which can not only guarantee a high level of secrecy, but also, with a high level of certainty, provide a person identity through Information Fusion (IF) techniques. Specifically, two non-connected areas have been joined, Biometrics and Public-key Cryptography. This choice was taken in order to get through the limits these two approaches have found singularly. An innovative and original algorithm has been developed, which can do fusion operations between biometric and numerical data, that is an algorithm of Hybrid Information Fusion, named BNIF (Biometric & Numerical Information Fusion), we decided to use a digital fingerprint as a biometric component, and the product of two prime numbers as a numerical component, that is the module in RSA algorithm.

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