

## **IMPROVING THE SECURITY IN MOBILE COMMUNICATIONS**

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### **Abstract**

Nowadays, the use of wireless communication is growing and the GSM network has become a necessity for many users. Therefore good security is required in order to preserve the authentication, confidentiality and integrity of data sent between both subscribers and base station. In this paper, we propose a new key generation algorithm that can be used in the encryption algorithm A5 used in GSM, in order to ensure better security and make it harder for cryptanalysis to reveal the data. This algorithm will support two generations of SIM cards, one to support our developed algorithm and the other is the currently used one.