

ABSTRACT**AUTHENTICATION METHODS AND SYSTEMS**

The invention provides a solution for secure authentication of an individual. The invention comprises methods and apparatus for secure input of a user's identifier e.g. PIN. An image of a keypad is superimposed over a scrambled, operable keypad within a display zone of a screen associated with an electronic device. The keypad image depicts a non-scrambled keypad, in that the keys depicted in the image are in an expected or standardised format or order. The difference in positions of the keys depicted in the image, and those in the operable keypad, provides a mapping which enables an encoded form of the identifier to be generated, such that the un-encoded version is never stored in the device's memory. Preferably, the image depicts a keypad which is standard for the device which it is being shown on. The device may be a mobile phone, a tablet computer, laptop, PC, payment terminal or any other electronic computing device with a screen. The underlying keypad, which is at least partially obscured from the user's view by the image, may be generated at run time by a procedure call. Preferably, this procedure is native to the device ie part of a library which is provided as standard with the device.

[Figure 1]