

(43) International Publication Date
23 January 2014 (23.01.2014)

- (51) **International Patent Classification:**
G07F 7/10 (2006.01) *G06F 21/31* (2013.01)
- (21) **International Application Number:**
PCT/GB2013/051913
- (22) **International Filing Date:**
17 July 2013 (17.07.2013)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
1212878.1 20 July 2012 (20.07.2012) GB
1306053.8 4 April 2013 (04.04.2013) GB
- (71) **Applicant:** LICENTIA GROUP LIMITED [GB/GB]; 3 Assembly Square, Britannia Quay, Cardiff, South Glamorgan CF10 4PL (GB).
- (72) **Inventor:** PIKE, Justin; c/o 3 Assembly Square, Britannia Quay, Cardiff, South Glamorgan CF10 4PL (GB).
- (74) **Agent:** JONES, Cerian Elizabeth; Urquhart-Dykes & Lord LLP, 7th Floor, Churchill House, Churchill Way, Cardiff, South Glamorgan CF10 2HH (GB).
- (81) **Designated States** (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,

BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

- (88) **Date of publication of the international search report:**
20 March 2014

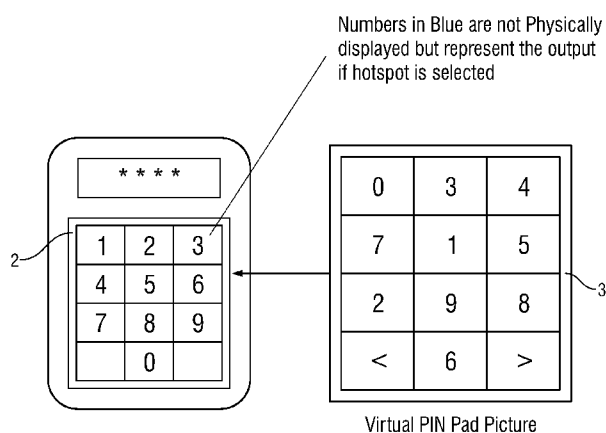
(54) **Title:** PIN VERIFICATION

FIG. 9

(57) **Abstract:** The invention provides a computer-implemented authentication method comprising the step of enabling a user to input an identifier (e.g. a PIN) into an electronic device having a screen and a keypad operable within a keypad zone of the screen; by operating at least one key of the keypad via an image of at least part of a scrambled keypad which is displayed at least partially within the keypad zone. The user's operation of the keypad key via the image generates an encoded version of the user's intended input. In one sense the invention can be perceived as superimposing a non-functional image of a scrambled keyboard over an underlying, functional keypad. The image may be any type of electronic image, and may include a video image. The invention is particularly suited for use with, but not limited to, mobile phones, tablet computer, PCs etc. It can be implemented in any system wherein a user's identity must be verified before access is granted to a controlled resource.