



(51) International Patent Classification:

G06F 21/32 (2013.01) G06F 21/36 (2013.01)
G06F 21/34 (2013.01) G06Q 20/40 (2012.01)

(21) International Application Number:

PCT/US2020/061937

(22) International Filing Date:

24 November 2020 (24.11.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

16/726,565 24 December 2019 (24.12.2019) US

(71) Applicant: **CAPITAL ONE SERVICES, LLC** [US/US];
1680 Capital One Drive, McLean, Virginia 22102 (US).

(72) Inventors: **OSBORN, Kevin**; c/o Capital One Services, LLC, 1680 Capital One Drive, McLean, Virginia 22102 (US). **CHIGURUPATI, Srinivasa**; c/o Capital One Services, LLC, 1680 Capital One Drive, McLean, Virginia 22102 (US). **RULE, Jeffrey**; c/o Capital One Services,

LLC, 1680 Capital One Drive, McLean, Virginia 22102 (US).

(74) Agent: **CARR, Nick** et al.; Kacvinsky Daisak Bluni PLLC, 2601 Weston Parkway, Suite 103, Cary, North Carolina 27513 (US).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, 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, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ,

(54) Title: STEGANOGRAPHIC IMAGE ENCODING OF BIOMETRIC TEMPLATE INFORMATION ON A CARD

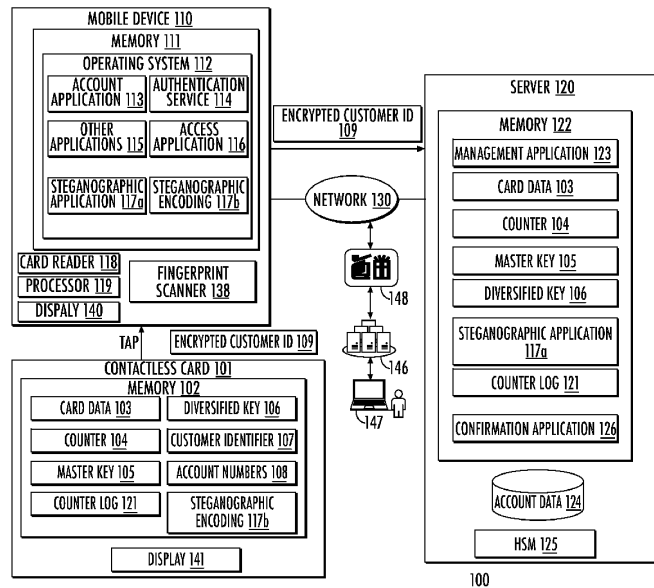


FIG. 1

(57) Abstract: Various embodiments are generally directed to utilizing a steganographically encoded image with an offline and/or on-line verification or authentication protocol. A method for using the steganographic image can include: receiving or utilizing a steganographic image associated with a user at a third-party device, the steganographically encoded image including an identification of a user steganographically encoded with a fingerprint template of the user, and authenticating the user using the steganographically encoded image.

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))*