

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
03 August 2023 (03.08.2023)



(10) International Publication Number
WO 2023/144013 A1

(51) International Patent Classification:

G06F 21/62 (2013.01) H04L 9/06 (2006.01)
G06F 21/64 (2013.01) G06F 21/78 (2013.01)

(21) International Application Number:

PCT/EP2023/051283

(22) International Filing Date:

19 January 2023 (19.01.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

2201068.0 27 January 2022 (27.01.2022) GB

(71) Applicant: **ANZEN TECHNOLOGY SYSTEMS LIMITED** [GB/GB]; Preston Park House, South Road, Brighton BN1 6SB (GB).

(72) Inventors: **LI, Hoon-Ywen**; 111 Florence Road, London SW19 8TL (GB). **BROWN, Charlie Sillitoe**; 9 Jingling Lane, Kirkby Lonsdale, Camforth Lancashire LA6 2AW

(GB). **BRUCKER, Achim D**; 3 Fairmead Court, Pinn Lane, Exeter EX1 3QG (GB).

(74) Agent: **MARKS & CLERK LLP**; 15 Fetter Lane, London EC4A 1BW (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, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, 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, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ,

(54) Title: SECURE DISTRIBUTED PRIVATE DATA STORAGE SYSTEMS

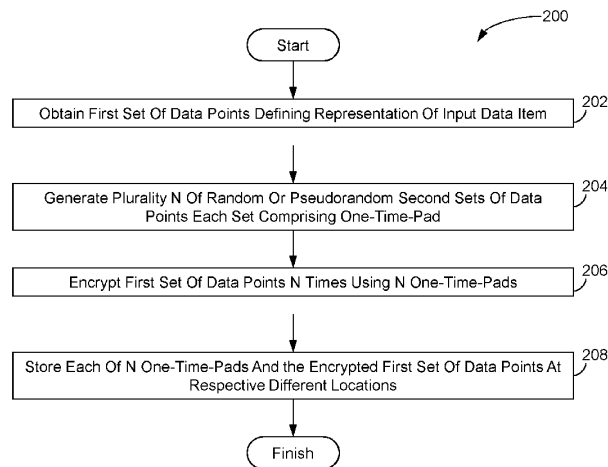


FIG. 2A

(57) Abstract: A computer implemented method of securely storing an anonymised input data item, the method comprising: (i) obtaining a first set of data points defining a representation of the input data item, wherein each data point is defined by a numeric value; (ii) generating a plurality n of random or pseudorandom second sets of data points, where n is two or more, each set comprising a one-time-pad, (iii) encrypting the first set of data points n times using the n one-time-pads; and (iv) storing each of the n one-time-pads and the encrypted first set of data points at respective different locations.

[Continued on next page]

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, ME, 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))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*