

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
28 October 2021 (28.10.2021)



(10) International Publication Number
WO 2021/216765 A1

(51) International Patent Classification:
H04L 29/06 (2006.01) *H04L 9/08* (2006.01)

(21) International Application Number:
PCT/US2021/028473

(22) International Filing Date:
21 April 2021 (21.04.2021)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
63/013,746 22 April 2020 (22.04.2020) US

(71) Applicant: **VISA INTERNATIONAL SERVICE ASSOCIATION** [US/US]; P.O. Box 8999, San Francisco, California 94128 (US).

(72) Inventors: **REZAEI, Fahimeh**; P.O. Box 8999, San Francisco, California 94128 (US). **KEKICHEFF, Marc**; P.O. Box 8999, San Francisco, California 94128 (US). **SMIRNOFF, Sergey**; P.O. Box 8999, San Francisco, California 94128 (US). **MARTIN, Philippe**; P.O. Box 8999, San Francisco, California 94128 (US).

(74) Agent: **JEWIK, Patrick** et al.; 1100 Peachtree Street, NE Suite 2800, Atlanta, Georgia 30309 (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, 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).

(54) Title: ONLINE SECRET ENCRYPTION

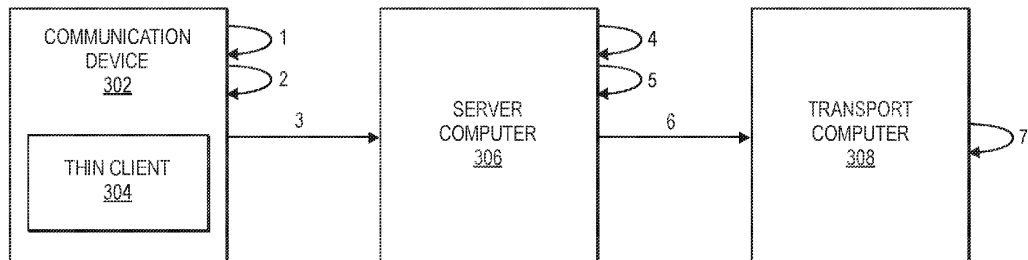


FIG. 3

(57) Abstract: A method includes receiving, by a server computer, a thin client identifier from a thin client on a communication device. The server computer can then retrieve an encrypted first cryptographic key based on the thin client identifier. The encrypted first cryptographic key is a first cryptographic key that is encrypted with a second cryptographic key. The server computer can initiate the sending of the encrypted first cryptographic key to the thin client. The server computer then receives an encrypted secret from the thin client, the encrypted secret being a secret encrypted with the first cryptographic key.

[Continued on next page]

Declarations under Rule 4.17:

- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*