

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
09 April 2020 (09.04.2020)



(10) International Publication Number
WO 2020/072424 A1

(51) International Patent Classification:
G06Q 20/00 (2012.01)

(21) International Application Number:
PCT/US2019/053963

(22) International Filing Date:
01 October 2019 (01.10.2019)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
62/740,352 02 October 2018 (02.10.2018) US
16/205,119 29 November 2018 (29.11.2018) US
16/351,365 12 March 2019 (12.03.2019) US

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

(72) Inventors: OSBORN, Kevin; 49 Hillside Road, New-
ton Highlands, MA 02461 (US). RULE, Jeffrey; 3906
Laird Place, Chevy Chase, MD 20815 (US). ASHFIELD,
James; 14106 Old Fort Drive, Midlothian, VA 23113
(US). CHIGURUPATI, Srinivasa; 5804 Teal Court, Long
Grove, IL 60047 (US).

(74) Agent: KASNEVICH, Andrew, D. et al.; Hunton Andrews
Kurth LLP, 2200 Pennsylvania Ave, NW, Washington, DC
20037 (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, 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, 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, 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: SYSTEMS AND METHODS FOR CRYPTOGRAPHIC AUTHENTICATION OF CONTACTLESS CARDS

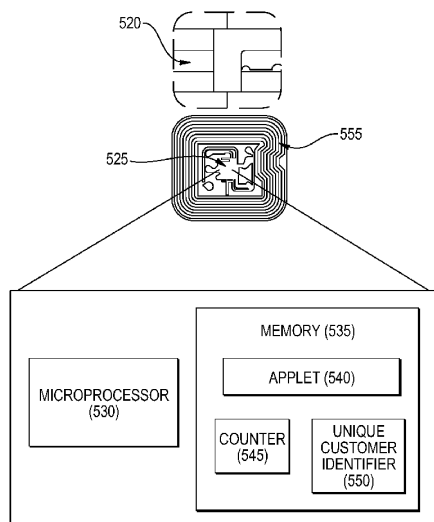


FIG. 5B

(57) Abstract: Example embodiments of systems and methods for data transmission and authorizing transactions between transmitting and receiving devices are provided. In an embodiment, a method includes generating a request for at least one authentication factor when a value of the transaction exceeds a predetermined value, wherein the at least one authentication factor includes a cryptogram, receiving an authentication signal, the authentication signal including the cryptogram, and authorizing a transaction when the authentication signal is received.

WO 2020/072424 A1

[Continued on next page]

Published:

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