

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
22 June 2023 (22.06.2023)



(10) International Publication Number
WO 2023/113698 A3

(51) International Patent Classification:

G06Q 20/02 (2012.01) *G06Q 20/22* (2012.01)
G06Q 20/10 (2012.01) *G06Q 20/38* (2012.01)

(21) International Application Number:

PCT/SG2022/050914

(22) International Filing Date:

16 December 2022 (16.12.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

17/644,892 17 December 2021 (17.12.2021) US

(71) Applicant: **PARTIOR PTE. LTD.**, [SG/SG]; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG).

(72) Inventors: **MALLELA, Naveen**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **ODDIRAJU, Srimukh**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **ATTARD, Mark J.**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **BHUCHAR, Atul**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **DESOUZA, Keith**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **TAY, Zhenqian**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **LEE, Muh Hwa**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **KHIM, Ng Phen**; 60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG). **LOH, Chang Ching**; Singapore, Singapore 238891 (SG).

(54) Title: DISTRIBUTED LEDGER BASED MULTI-CURRENCY CLEARING AND SETTLEMENT

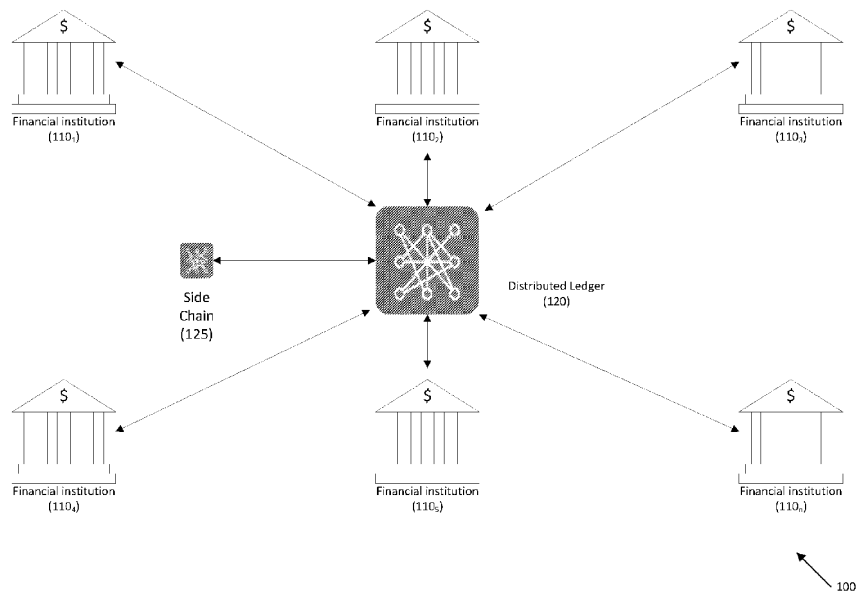


FIGURE 1

(57) Abstract: OF THE DISCLOSURE A distributed ledger system may include a first distributed ledger node associated with a first participant bank that maintains a first participant bank deposit account on a blockchain-based distributed ledger in a distributed ledger network; a second distributed ledger node associated with a second participant bank that maintains a second participant bank deposit account on the blockchain-based distributed ledger; and a third distributed ledger node associated with a liquidity provider that maintains a liquidity provider deposit account on the blockchain-based distributed ledger. A consensus algorithm operates on the distributed ledger nodes and updates the blockchain-based distributed ledger in which multiple copies of the blockchain-based distributed ledger across the distributed ledger nodes, and transactions involving the first participant bank deposit account, the second participant bank deposit account, and/or the liquidity provider deposit account are added to a block to the blockchain-based distributed ledger.

[Continued on next page]

60B Orchard Road #06-18, The Atrium @ Orchard, Singapore, Singapore 238891 (SG).

(74) **Agent: DREW & NAPIER LLC**; 10 Collyer Quay, #10-01 Ocean Financial Centre, Singapore 049315 (SG).

(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, 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))
- 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 July 2023 (20.07.2023)