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(54) Title: MANAGING TRANSACTION REQUESTS IN LEDGER SYSTEMS

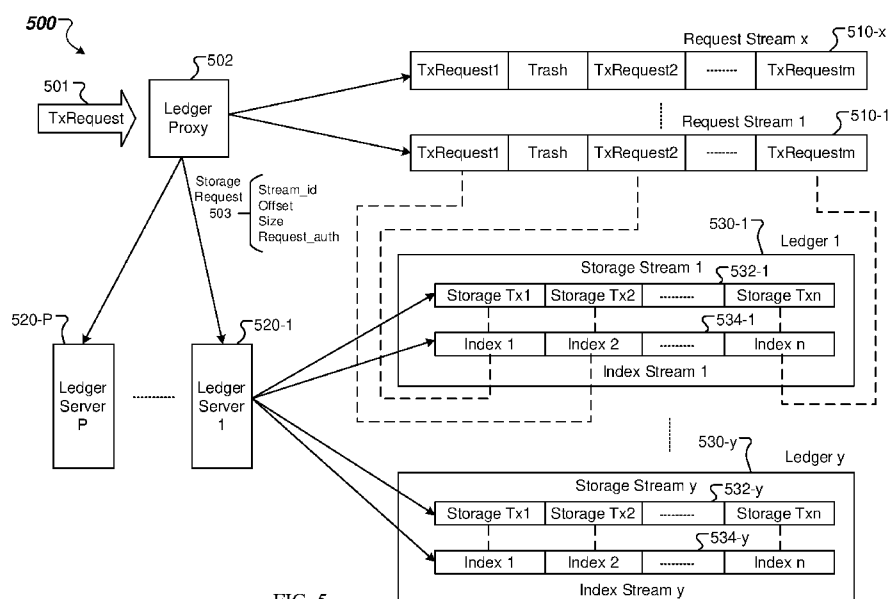


FIG. 5

(57) **Abstract:** Disclosed herein are methods, systems and apparatus, including computer programs encoded on computer storage media, for managing transaction requests in ledger systems. One of the methods includes: receiving a first plurality of transaction requests, each of the first plurality of transaction requests comprising content information and authentication information of a corresponding transaction, storing each of a second plurality of transaction requests among the first plurality of transaction requests in a respective request stream, transmitting a storage request for a transaction request stored in a request stream to a ledger server, the storage request comprising storage information of the transaction request and authentication information of a transaction corresponding to the transaction request, receiving index information corresponding to the storage request for the transaction request from the ledger server, the index information indicating a location of the storage information stored by the ledger server.



(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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

CNABS, CNTXT, DWPI, USTXT, EPTXT, WOTXT: transaction?, ledger, proxy, agency, agent, stream, stor+, sav+, cach+, index, location, size, authentic+

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2019217428 A1 (CONVIDA WIRELESS, LLC) 14 November 2019 (2019-11-14) description, paragraphs [00190]-[00236], figure 16	1-15
A	US 2019333059 A1 (NXM TECHNOLOGIES INC.) 31 October 2019 (2019-10-31) the whole document	1-15
A	CN 110770774 A (VISA INTERNATIONAL SERVICE ASSOCIATION) 07 February 2020 (2020-02-07) the whole document	1-15
A	CN 110874739 A (INT. BUSINESS MACHINES CORP.) 10 March 2020 (2020-03-10) the whole document	1-15
A	US 2019347658 A1 (ORACLE INTERNATIONAL CORPORATION) 14 November 2019 (2019-11-14) the whole document	1-15

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

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“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

“Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

“&” document member of the same patent family

Date of the actual completion of the international search

05 January 2021

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WO	2019217428	A1	14 November 2019	CN	111869187	A	30 October 2020
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				WO	2018236401	A1	27 December 2018
				SG	11201911853	A1	30 January 2020
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				KR	20190128590	A	18 November 2019
				CA	3043202	A1	05 February 2020
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				AU	2019202955	A1	28 November 2019