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(54) Title: A METHOD ENABLING LAW ENFORCEMENTS, REGULATIONS, SOCIAL, ECONOMIC, AND FINANCIAL TRANSACTIONS AND VERIFICATIONS ON THE BLOCKCHAIN

(57) Abstract: In this invention, any information (instructions, events, happenings, invitations, societal interactions, histories, relationships, associations, memberships, affiliations, hierarchies, rights, privileges, requests, ownerships, obligations, liabilities, contracts, promises, identities, attributes, statuses, endorsements, qualifications, certifications, credentials, etc.) worth recording for later reference, transaction, verification, calculation, determination, and execution can be recorded into the blockchain system via electronic communications sent by law enforcement agencies, regulators, and other entities or individuals to the blockchain operators and guardians (nodes, miners, etc.). The blockchain system can then decide whether a transaction should be approved, whether to unfreeze a frozen account, how a smart contract should proceed and settle, etc. External systems can also query the blockchain system for facts, verifications, guidance, etc. This invention enables law enforcements, regulations, as well as social, economic, and financial transactions and verifications on the blockchain, and works in both permissionless and permissioned blockchain systems.

#### INTERNATIONAL SEARCH REPORT

International application No.

#### PCT/IB2023/062868

#### A. CLASSIFICATION OF SUBJECT MATTER

G06Q 20/38(2012.01)i

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)

IPC: G06Q; G06F

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;WPABS;DWPI;CNTXT;ENTXT;ENTXTC;CNKI: blockchain, transaction, node, miner, key, identifier, authority, sign, email, address, encode, verify, broadcast, store, record, block, encrypt, privacy, party, smart, token, contract, share, transfer, vote, account

### C. DOCUMENTS CONSIDERED TO BE RELEVANT

Further documents are listed in the continuation of Box C.

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 112435020 A (CHENGDU LIANXIANG TECHNOLOGY CO., LTD.) 02 March 2021 (2021-03-02) the whole document	1-26
A	CN 109729168 A (ZHEJIANG SUCCESSFUL SOFTWARE DEVELOPMENT CO., LTD.) 07 May 2019 (2019-05-07) the whole document	1-26
A	US 2019340689 A1 (EQUITY SHIFT INC.) 07 November 2019 (2019-11-07) the whole document	1-26
A	US 2021390549 A1 (CAPITAL ONE SERVICES LLC) 16 December 2021 (2021-12-16) the whole document	1-26

* "A"	Special categories of cited documents: document defining the general state of the art which is not considered to be of particular relevance	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention			
"D" "E" "L" "O" "P"	document cited by the applicant in the international application earlier application or patent but published on or after the international filing date document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y"	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 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			Date of mailing of the international search report			
	24 June 2024		01 July 2024			
Name and mailing address of the ISA/CN		Authorized officer				
CHINA NATIONAL INTELLECTUAL PROPERTY ADMINISTRATION 6, Xitucheng Rd., Jimen Bridge, Haidian District, Beijing 100088, China			ZHAO,WeiHua			

See patent family annex.

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# INTERNATIONAL SEARCH REPORT Information on patent family members

International application No.

## PCT/IB2023/062868

	Patent document cited in search report		Publication date (day/month/year) Patent family member(s)		(s)	Publication date (day/month/year)		
	CN	112435020	A	02 March 2021	•	None		
	CN	109729168	A	07 May 2019		None		
	US	2019340689	A1	07 November 2019	US	11948194	B1	02 April 2024
					US	10699340	B2	30 June 2020
					US	2020320631	<b>A</b> 1	08 October 2020
					US	11532047	B2	20 December 2022
					US	11748811	B1	05 September 2023
	US	2021390549	A1	16 December 2021	EP	4165855	A1	19 April 2023
					CA	3183038	<b>A</b> 1	23 December 2021
					WO	2021257447	<b>A</b> 1	23 December 2021
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