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(54) Title: EXECUTING MULTI-PARTY TRANSACTIONS USING SMART CONTRACTS

(57) Abstract: Provided are system and method for executing a multi-party transaction in a block chain network. The system may perform the method as follows: receiving first transaction information from a first node, wherein the first node is a computer node in the block chain network, and wherein the first transaction information comprises a transaction payload, a first public key, and a signed transaction payload for a transaction; verifying the signed transaction payload using the first public key; in response to verifying the signed transaction payload, constructing an unconfirmed transaction data package, and setting a confirmation status of the unconfirmed transaction data package; receiving second transaction information from a second node, wherein the second node is a computer node in the block chain network, and wherein the second transaction information includes a hash of the transaction payload, a second public key, and a signed hash of the transaction payload for the transaction; verifying the second transaction information using the second public key; updating the confirmation status of the unconfirmed transaction data package, and executing the transaction payload in response to the confirmation status indicating that all parties to the transaction have confirmed the transaction.

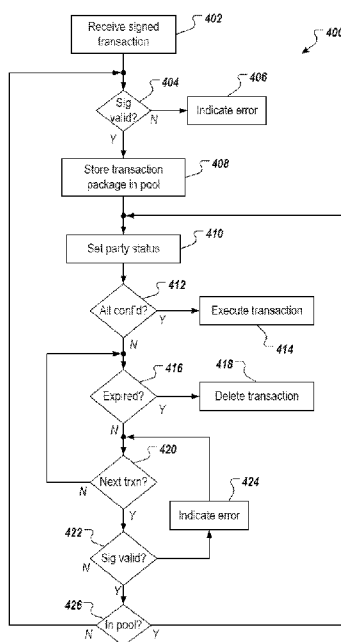


FIG. 4



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## INTERNATIONAL SEARCH REPORT

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<b>A. CLASSIFICATION OF SUBJECT MATTER</b> G06Q 40/04(2012.01)i  According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) G06Q  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) CNPAT, CNKI, WPI, EPODOC: block chain, smart contract, status, confirm, multiparty, hash, transaction		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 108632045 A (ALIBABA GROUP HOLDING LIMITED) 09 October 2018 (2018-10-09) description, paragraphs [0033]-[0052], [0064]-[0086]	1-9
A	US 2018096121 A1 (CABLE TELEVISION LABORATORIES, INC) 05 April 2018 (2018-04-05) the whole document	1-9
A	CN 108242013 A (CHINA MERCHANTS BANK CO., LTD.) 03 July 2018 (2018-07-03) the whole document	1-9
A	CN 108229981 A (HANGZHOU YUNXIANG NETWORK TECHNOLOGY CO., LTD.) 29 June 2018 (2018-06-29) the whole document	1-9
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
<p>* Special categories of cited documents:</p> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“L” 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)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p> <p>“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</p> <p>“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</p> <p>“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</p> <p>“&amp;” document member of the same patent family</p>		
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**INTERNATIONAL SEARCH REPORT**  
**Information on patent family members**

International application No.

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Patent document cited in search report	Publication date (day/month/year)	Patent family member(s)	Publication date (day/month/year)
CN 108632045 A	09 October 2018	None	
US 2018096121 A1	05 April 2018	None	
CN 108242013 A	03 July 2018	None	
CN 108229981 A	29 June 2018	None	