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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER G06F 21/60(2013.01)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) G06F, 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: authentication, transfer, identify, proof, node, blockchain, guarantee, cyphertext, modify, ZKP		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2019251553 A1 (ALIBABA GROUP HOLDING LTD.) 15 August 2019 (2019-08-15) description, paragraphs [0020]-[0076]	1-13
A	CN 109558517 A (SUN YAT-SEN UNIVERSITY) 02 April 2019 (2019-04-02) the whole document	1-13
A	US 2009271618 A1 (INTERNATIONAL BUSINESS MACHINES CORPORATION) 29 October 2009 (2009-10-29) the whole document	1-13
A	CN 109614820 A (SHANDONG UNIVERSITY) 12 April 2019 (2019-04-12) the whole document	1-13
A	US 2019205898 A1 (CHRONICLED, INC.) 04 July 2019 (2019-07-04) the whole document	1-13
<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>“&” document member of the same patent family</p>		
Date of the actual completion of the international search 22 October 2020		Date of mailing of the international search report 17 November 2020
Name and mailing address of the ISA/CN National Intellectual Property Administration, PRC 6, Xitucheng Rd., Jimen Bridge, Haidian District, Beijing 100088 China Facsimile No. (86-10)62019451		Authorized officer ZHAO,Xiaomin Telephone No. 86-(10)-53961332

INTERNATIONAL SEARCH REPORT
Information on patent family members

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