

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
25 July 2019 (25.07.2019)



(10) International Publication Number
WO 2019/141294 A3

- (51) **International Patent Classification:**
G06Q 50/18 (2012.01)
- (21) **International Application Number:**
PCT/CN2019/087635
- (22) **International Filing Date:**
20 May 2019 (20.05.2019)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (71) **Applicant: ALIBABA GROUP HOLDING LIMITED**
[—/CN]; Fourth Floor, One Capital Place, P.O. Box 847,
George Town, Grand Cayman (KY).
- (72) **Inventor: LI, Zhiguo;** Alibaba Group Legal Department 5/
F, Building 3, No. 969 West Wen Yi Road, Yu Hang Dis-
trict, Hangzhou, Zhejiang 311121 (CN).
- (74) **Agent: BEIJING BESTIPR INTELLECTUAL PROP-
ERTY LAW CORPORATION;** Room 409, Tower B, Ka
Wah Building, No. 9 Shangdi 3rd Street, Haidian District,
Beijing 100085 (CN).
- (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, SM, ST, SV, SY, TH, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, 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, 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))*
- *upon request of the applicant, before the expiration of the
time limit referred to in Article 21(2)(a)*

(54) **Title:** IDENTIFYING COPYRIGHTED MATERIAL USING COPYRIGHT INFORMATION EMBEDDED IN TABLES

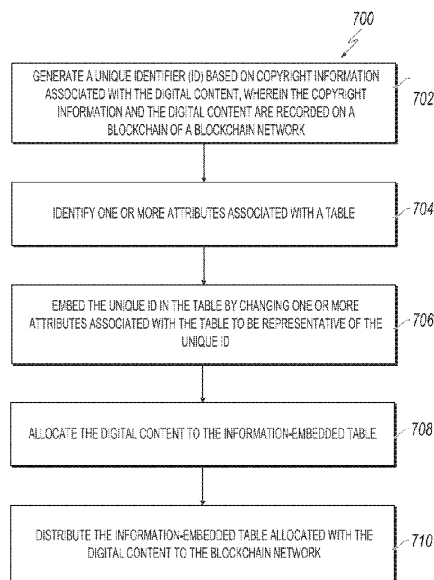


FIG. 7

(57) **Abstract:** Disclosed herein are methods, systems, and apparatus, including computer programs encoded on computer storage media, for identifying copyrighted material based on embedded copyright information. One of the methods includes generating, by a computing device, a unique identifier (ID) based on copyright information associated with the digital content, wherein the copyright information and the digital content are recorded on a blockchain of a blockchain network; identifying, by the computing device, one or more attributes associated with a table; embedding, by the computing device, the unique ID in the table by changing one or more attributes associated with the table to be representative of the unique ID, wherein the embedding produces an information-embedded table that enables retrieval of the copyright information from the blockchain based on the unique ID, and wherein a visual difference between the table and the information-embedded table is not apparent to an unaided human eye; allocating, by the computer device, the digital content to the information-embedded table; and distributing the information-embedded table allocated with the digital content to the blockchain network.

WO 2019/141294 A3

[Continued on next page]

(88) Date of publication of the international search report:
02 April 2020 (02.04.2020)