

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
14 September 2023 (14.09.2023)



(10) International Publication Number
WO 2023/172932 A3

(51) International Patent Classification:
G06F 16/901 (2019.01) *H04L 9/32* (2006.01)
G06F 16/28 (2019.01) *G06F 16/00* (2019.01)

(21) International Application Number:
PCT/US2023/063891

(22) International Filing Date:
07 March 2023 (07.03.2023)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
17/654,056 08 March 2022 (08.03.2022) US

(71) Applicant: **BLOOM PROTOCOL, LLC** [US/US]; 374
Vista Oak Drive, Bronx, NY 10463 (US).

(72) Inventor: **SCHOUWEN, Dustin Van**; 660 Dennett St,
Portsmouth, NH 03801 (US).

(74) Agent: **RODRIGUEZ, Juan P.**; Law Office of Jenna F
Karabil, P.C., 174 W. 4th Street, #319, New York, NY 10014
(US).

(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, CV, CZ, DE, DJ, DK, DM,
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,
HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE,
KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU,
LY, MA, MD, 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.

(54) Title: SYSTEMS, METHODS, AND STORAGE MEDIA FOR SELECTIVE GRAPH-BASED DISCLOSURE OF A COMPUT-
ER DATA STRUCTURE

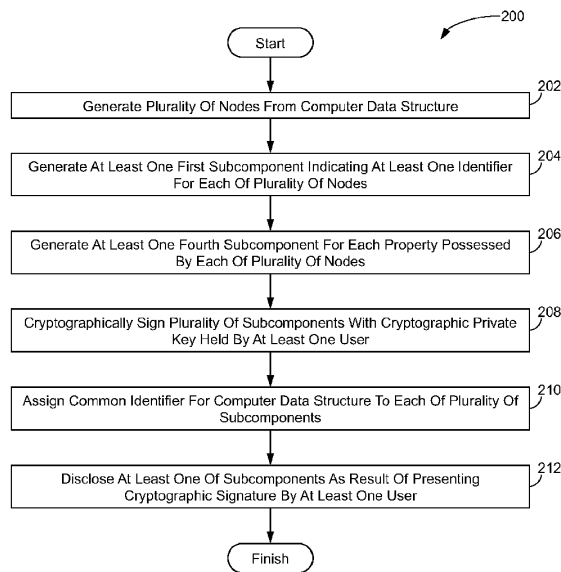


FIG. 2A

(57) Abstract: Systems, methods, and storage media for selective graph-based disclosure of a computer data structure are disclosed. Exemplary implementations may: generate a plurality of nodes from the computer data structure; generate at least one first subcomponent indicating at least one identifier for each of the plurality of nodes; generate at least one fourth subcomponent for each property possessed by each of the plurality of nodes; cryptographically sign the plurality of subcomponents with a cryptographic private key held by at least one user; assign a common identifier for the computer data structure to each of the plurality of subcomponents; and disclose at least one of the subcomponents by presenting the subcomponent along with a cryptographic signature of the subcomponent by the at least one user.

[Continued on next page]

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, 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, ME, 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))*

(88) Date of publication of the international search report:

02 November 2023 (02.11.2023)