



- (51) International Patent Classification:
G06Q 10/06 (2023.01) *G06Q 50/28* (2012.01)
- (21) International Application Number:
PCT/US2022/026375
- (22) International Filing Date:
26 April 2022 (26.04.2022)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
63/180,309 27 April 2021 (27.04.2021) US
- (72) Inventors; and
(71) Applicants: GRUBER, Patrick [US/US]; 8800 Sage Valley Rd, Longmont, Colorado 80503 (US). IMPEKOVEN, Christoph [DE/DE]; Taunusanlage 8, 60329 Frankfurt (DE).
- (74) Agent: HENSON, Michael et al.; 1201 THIRD AVENUE, SUITE 4900, SEATTLE, Washington 98101 (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, 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, IT, JM, 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, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(54) Title: SYSTEMS AND METHODS FOR AUTOMATIC CARBON INTENSITY CALCULATION AND TRACKING

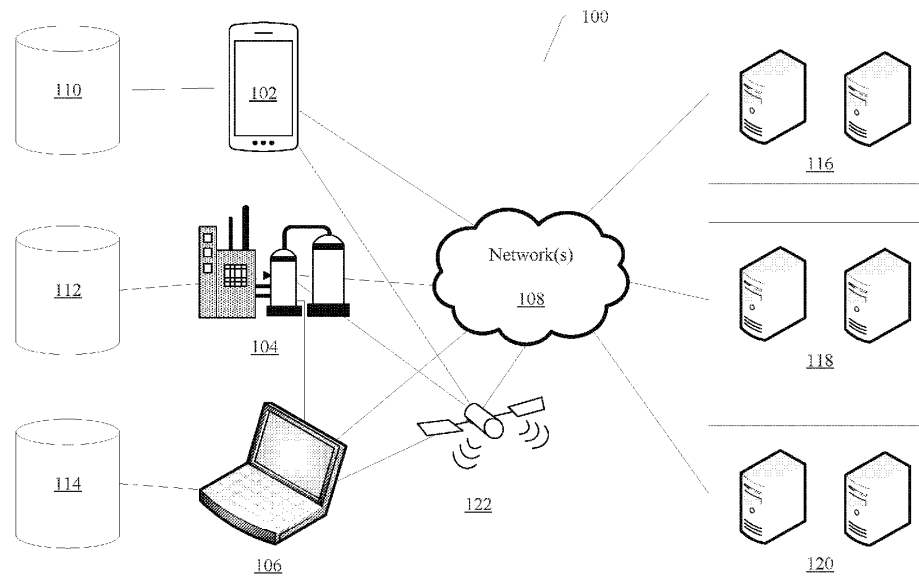


FIG. 1

(57) Abstract: Examples of the present disclosure describe systems/methods for automatically generating and tracking a carbon intensity (CI) score assigned to a particular product as the product traverses through a processing plant and discrete steps in a supply chain. In some examples, intermediate CI scores may be assigned to the product as it completes each step in its life cycle. The intermediate CI scores may be aggregated to produce a final CI score. Each intermediate CI score is recorded on a blockchain, such that the CI score is independently verifiable and auditable. In other example aspects, a machine-learning model may be applied to the input data received from each supply chain stakeholder and CI scores, wherein the machine-learning model generates intelligent suggestions to stakeholders for how to tweak their processes to lower CI scores. In other examples, a CI score may be used to derive a value for a CI token.

[Continued on next page]

(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))*

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

15 December 2022 (15.12.2022)