

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
10 November 2022 (10.11.2022)



(10) International Publication Number
WO 2022/234286 A1

- (51) **International Patent Classification:**
G06V 20/52 (2022.01) *G06V 10/20* (2022.01)
- (21) **International Application Number:**
PCT/GB2022/051150
- (22) **International Filing Date:**
05 May 2022 (05.05.2022)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
2106552.9 07 May 2021 (07.05.2021) GB
- (71) **Applicant:** SCALPEL LTD. [GB/GB]; 109, Brickfields Business Centre, 37 Cremer Street, London E2 8HD (GB).
- (72) **Inventors:** PULJALA, Yeshwanth; c/o Scalpel Ltd., 109, Brickfields Business Centre, 37 Cremer Street, London E2 8HD (GB). AHMED, Shahnawaz; c/o Scalpel Ltd., 109, Brickfields Business Centre, 37 Cremer Street, London E2 8HD (GB).

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, 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.

- (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))

- (74) **Agent:** COOLEY (UK) LLP; 22 Bishopsgate, London EC2N 4BQ (GB).
- (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,

(54) **Title:** COMPUTER-IMPLEMENTED METHOD AND SYSTEM FOR IDENTIFYING OBJECTS IN AN ENVIRONMENT

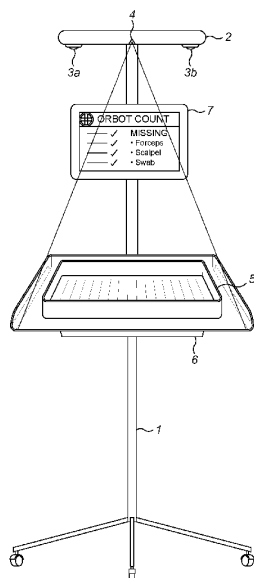


FIG. 1

(57) **Abstract:** A computer-implemented method for identifying objects in an environment is disclosed. The method comprises: receiving image data representing the environment from one or more cameras; analysing the image data to detect objects in the environment and for each detected object, assigning a preliminary identification label and confidence factor to the object; receiving environmental data from one or more environmental sensors, analysing the environmental data to detect classification indicators and for each detected object, modifying the confidence factor assigned to the object if a classification indicator correlates with the preliminary identification label and/or using one or more measurement sensors to measure one or more physical characteristics relating to a set of objects at a predefined location within the environment, the set of objects being included within the detected objects, and, for each measured physical characteristic, modifying the confidence factor associated with each object in the set if the physical characteristic corresponds to an expected value for the objects found at the predefined location; and for each detected object, identifying the object by associating with it a final identification label equal to the preliminary identification label if the confidence factor assigned to the object meets a predefined criterion.

WO 2022/234286 A1