



(51) International Patent Classification:

B64C 39/02 (2006.01) G06Q 10/08 (2012.01)
G05D 1/00 (2006.01) G08G 5/00 (2006.01)
G05D 1/10 (2006.01)

(21) International Application Number:

PCT/US2017/062691

(22) International Filing Date:

21 November 2017 (21.11.2017)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/425,173 22 November 2016 (22.11.2016) US

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(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,

(54) Title: SYSTEM AND METHOD FOR AUTONOMOUS BATTERY REPLACEMENT

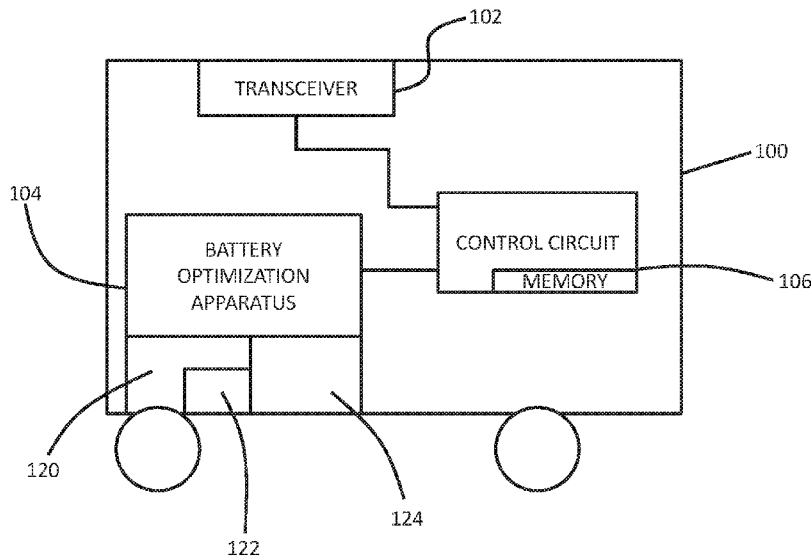


FIG. 1

(57) Abstract: An unmanned battery optimization vehicle includes a transceiver, a battery optimization apparatus, and a control circuit. The transceiver is configured to transmit and receive signals. The battery optimization apparatus is configured to interact with a battery disposed at an unmanned autonomous vehicle. The control circuit is coupled to the transceiver and the battery optimization apparatus. The control circuit is configured to cause the unmanned battery optimization vehicle to independently navigate and travel to a present location of the autonomous vehicle based at least in part upon the signals received at the transceiver. When the unmanned battery optimization vehicle reaches the present location of the unmanned autonomous vehicle, the control circuit is further configured to direct the battery optimization apparatus to engage in an interaction with the battery at the unmanned autonomous vehicle. The interaction is effective to optimize battery operation at the unmanned autonomous vehicle.



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))*

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

16 July 2020 (16.07.2020)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2017/062691

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - B64C 39/02; G05D 1/00; G05D 1/10; G06Q 10/08; G08G 5/00 (2018.01)

CPC - B64C 2201/027; B64C 2201/042; B64C 2201/066; G08G 5/0069 (2018.01)

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)

See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 701/3.000; 701/22.000; 701/25.000 (keyword delimited)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2016/0300496 A1 (ELWHA LLC) 13 October 2016 (13.10.2016) entire document	1-3, 5, 6, 8-20 --- 4, 7
Y	US 2014/0222271 A1 (METRALABS AUTOMATION INC) 07 August 2014 (07.08.2014) entire document	4
Y	US 2016/0039542 A1 (SZ DJI TECHNOLOGY CO LTD) 11 February 2016 (11.02.2016) entire document	7
A	US 2015/0120094 A1 (AMAZON TECHNOLOGIES INC) 30 April 2015 (30.04.2015) entire document	1-20
A	US 2016/0163204 A1 (SINGULARITY UNIVERSITY) 09 June 2016 (09.06.2016) entire document	1-20
A	US 2016/0039540 A1 (SZ DJI TECHNOLOGY CO., LTD) 11 February 2016 (11.02.2016) entire document	1-20
A	US 2014/0319272 A1 (THE BOEING COMPANY) 30 October 2014 (30.10.2014) entire document	1-20

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Date of the actual completion of the international search

11 January 2018

Date of mailing of the international search report

02 FEB 2018

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