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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, 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.

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[Continued on next page]

(54) **Title:** MODULAR SENSING DEVICE FOR CONTROLLING A SELF-PROPELLED DEVICE

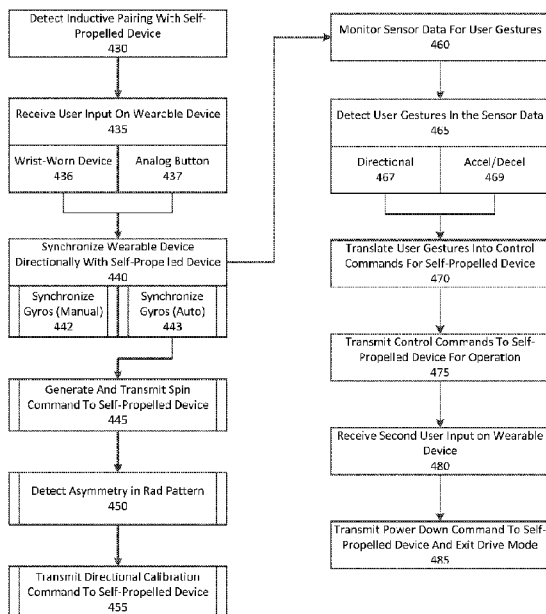


FIG. 4B

(57) **Abstract:** A wearable device can be worn by a user, and can include one or more sensors to detect user gestures performed by the user. The wearable device can further include a wireless communication module to establish a communication link with a self-propelled device, and a controller that can generate control commands based on the user gestures. The control commands may be executable to accelerate and maneuver the self-propelled device. The controller may then transmit the control commands to the self-propelled device over the communication link for execution by the self-propelled device.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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PCT/US2017/020771**A. CLASSIFICATION OF SUBJECT MATTER****G06F 1/16(2006.01)i, G06F 3/01(2006.01)i**

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)

G06F 1/16; B64C 13/20; B62D 61/00; G06F 9/46; G06F 3/0481; G06F 3/0488; G06F 3/0484; G06F 3/01

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

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: wearable device, sensor, gesture, control, self-propelled device

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|-----------------------|
| Y | US 2014-0008496 A1 (ZHOU YE et al.) 09 January 2014 See paragraphs [0021]-[0022], [0030], [0038], [0040]; claims 1, 6, 16; and figures 1, 3C-4. | 1-20 |
| Y | US 2014-0143784 A1 (SAMSUNG ELECTRONICS COMPANY, LTD.) 22 May 2014 See paragraphs [0102], [0113], [0140], [0164], [0166], [0174]; and figures 1, 61-67. | 1-20 |
| Y | US 2014-0020964 A1 (ORBOTIX, INC.) 23 January 2014 See paragraphs [0163], [0190]; and figure 11D. | 4-5 |
| A | US 2015-0026647 A1 (LG ELECTRONICS INC.) 22 January 2015 See paragraph [0015]; and figure 3. | 1-20 |
| A | US 2015-0077336 A1 (NOD, INC.) 19 March 2015 See paragraph [0008]; and figure 2. | 1-20 |

 Further documents are listed in the continuation of Box C. See patent family annex.

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