

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
12 February 2009 (12.02.2009)

(10) International Publication Number
WO 2009/019699 A3

- (51) International Patent Classification:
G05B 19/19 (2006.01)
- (21) International Application Number:
PCT/IL2008/001089
- (22) International Filing Date:
7 August 2008 (07.08.2008)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
185124 8 August 2007 (08.08.2007) IL
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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, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(88) Date of publication of the international search report:
4 March 2010

(54) Title: A SYSTEM FOR EXTENDING THE OBSERVATION, SURVEILLANCE, AND NAVIGATIONAL CAPABILITIES OF A ROBOT

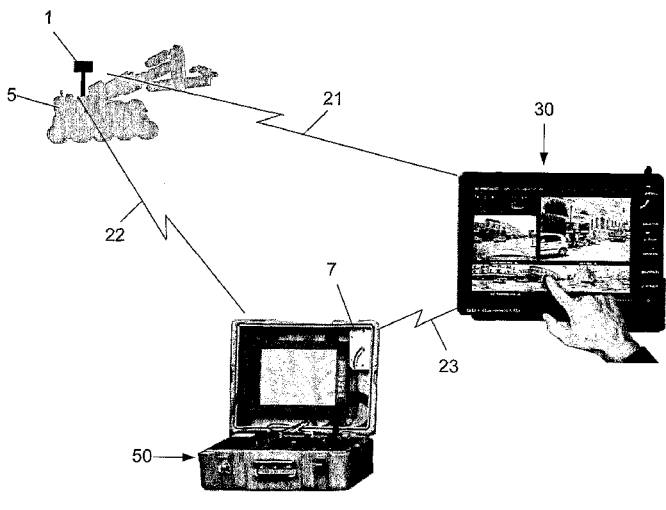


Fig. 1

(57) Abstract: The invention is a system that is integrated with an existing robotic system in order to extend its observation, surveillance, and navigational capabilities. The system comprises: a sensor module comprising imaging and other types of sensors that is attached to the robotic device of the robotic system and a system control station comprising a communication link to the robot control station of the existing robotic system. Both the system control station and the sensor module comprise processing units that are configured to work in complete harmony. These processing units are each supplied with software that enables using information supplied by the sensors and other components in the sensor module to provide the robotic systems with many advanced capabilities that could not be achieved prior to attachment of the sensor module to the robot.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 08/01089

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G05B 19/19 (2008.04) USPC - 318/568.11 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) IPC(8) - G05B 19/19 (2008.04) USPC - 318/568.11 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC(8) - G05B 19/19 (2008.04) USPC - 318/568.1-568.25 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PubWest: US PAT, US PGPUB, US OCR, EPO, JPO; Google Scholar; Keywords: robot, robotic, observation, navigation, surveillance, sensor, detector, control, communication, image, imaging, camera, video, sound, volume, vibration, carbon monoxide, smoke, temperature, nuclear, biological, chemical, moisture, (see continuation)		
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 7,211,980 B1 (BRUEMMER et al.) 01 May 2007 (01.05.2007) col 2, ln 2-34; col 5, ln 8-13; col 5, ln 57 - col 6, ln 6; col 6, ln 11-48; col 6, ln 59 - col 7, ln 7; col 10, ln 20-27; col 12, ln 35-47; col 13, ln 27-44; col 15, ln 14-29; col 15, ln 51-60; col 16, ln 6-22; col 16, ln 64 - col 17, ln 14; col 18, ln 2-21; col 22, ln 7-46; col 56, ln 24-29; col 57, ln 50-60; col 58, ln 12-26	1, 2, 4-12, 14, and 16 ----- 3, 13, and 15
Y	US 2005/0096790 A1 (TAMURA et al.) 05 May 2005 (05.05.2005) para [0030], [0033], [0034], [0036], and [0038]	3
Y	US 2003/0093187 A1 (WALKER) 15 May 2003 (15.05.2003) para[0077], [0119], [0407], [0528], [0699], and [0789]	13 and 15
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Date of the actual completion of the international search 28 November 2008 (28.11.2008)		Date of mailing of the international search report 15 DEC 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Continuation of B. FIELD SEARCH

digital compass, GPS, range detection, topographical map, graphical map, real-time, GUI, display, OCR, and video motion detection