

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 December 2009 (03.12.2009)

(10) International Publication Number
WO 2009/146082 A3

- (51) International Patent Classification:
G06Q 50/00 (2006.01)
- (21) International Application Number:
PCT/US2009/039179
- (22) International Filing Date:
1 April 2009 (01.04.2009)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:

61/041,349	1 April 2008 (01.04.2008)	US
61/049,824	2 May 2008 (02.05.2008)	US
61/162,704	24 March 2009 (24.03.2009)	US

[US/US]; Executive Director, Center of Excellence in Wireless and IT (CEWIT), Stony Brook University Research and Technology Park, Stony Brook, NY 11794-6040 (US). **EYNAV, Shmuel** [US/US]; Center of Excellence in Wireless and IT (CEWIT), Stony Brook University Research and Technology Park, Stony Brook, NY 11794-6040 (US). **STANACEVIC, Milutin** [US/US]; Center of Excellence in Wireless and IT (CEWIT), Stony Brook University Research and Technology Park, Stony Brook, NY 11794-6040 (US). **ATHALYE, Akshay** [US/US]; Center of Excellence in Wireless and IT (CEWIT), Stony Brook University Research and Technology Park, Stony Brook, NY 11794-6040 (US).

(71) Applicant (for all designated States except US): **THE RESEARCH FOUNDATION OF THE STATE UNIVERSITY OF NEW YORK** [US/US]; N5002 Frank Melville Jr. Memorial Library, Suny At Stony Brook, Stony Brook, NY 11794-3369 (US).

(74) Agent: **GALLAGHER III, John, F.**; The Farrell Law Firm, 290 Broadhollow Road., Ste 210E, Melville, NY 11747 (US).

(72) Inventors; and
 (75) Inventors/Applicants (for US only): **SHARONY, Jacob** [US/US]; Director Network Technologies Division, Center Of Excellence In Wireless And IT (CEWIT), Stony Brook University Research And, Technology Park, Stony Brook, NY 11794-6040 (US). **SHARMA, Satya**

(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,

[Continued on next page]

(54) Title: RFID MONITORING OF DRUG REGIMEN COMPLIANCE

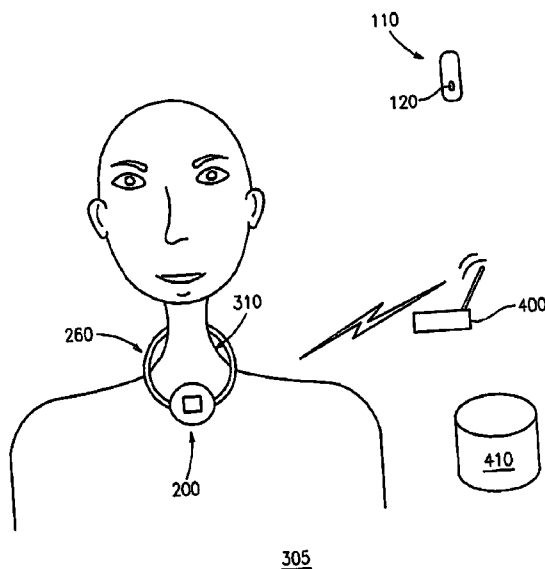


FIG. 1

(57) Abstract: Disclosed is an apparatus and system for monitoring drug regimen compliance, the system utilizing a Radio Frequency Identification (RFID) tag affixed to a pharmaceutical agent and a wearable RFID reader that identifies a patient. The RFID tag identifies the pharmaceutical agent and the RFID reader wirelessly communicates with a central monitoring system upon ingestion of the pharmaceutical agent.

WO 2009/146082 A3



SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, ZA, ZM, ZW.

Published:

- (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, MK, 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).

- 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:

21 January 2010

A. CLASSIFICATION OF SUBJECT MATTER**G06Q 50/00(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)

IPC : G06F, G06Q

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 since 1975

Japanese Utility models and applications for Utility Models since 1975

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

eKIPASS(KIPO) "tag, RFID, identification, wearable, attach, carry, medicine, pharmacy, food"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/0131281 A1 (STEVEN M. AYER. et al.) 16 June 2005 See the abstract; figure 1-2, paragraphs [0012]-[0015], [0028]	1-18
X	US 2006/0289640 A1 (PETER K. MERCURE. et al.) 28 December 2006 See the abstract; paragraphs [0008], [0039], [0063]	1-18
A	US 2007/0213659 A1 (KAREN I. TROVATO. et al.) 13 September 2007 See the abstract; paragraphs [0066]	1-18
A	US 2006/0210626 A1 (FEFFREY A. SPAEDER) 21 September 2006 See the abstract; figures 2; paragraphs [0036]-[0037], [0044]	1-18
A	US 5279607 A (JEROME J. SCHENTAG. et al.) 18 January 1994 See the abstract; column 4	1-18

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

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

01 DECEMBER 2009 (01.12.2009)

Date of mailing of the international search report

01 DECEMBER 2009 (01.12.2009)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-
gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

RA, Kwang Pyo

Telephone No. 82-42-481-5649



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/039179

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2005-131281 A1	16.06.2005	US 07427266 B2	23.09.2008
US 2006-289640 A1	28.12.2006	US 07382263 B2	03.06.2008
US 2007-0213659 A1	13.09.2007	EP 1789128 A1	30.05.2007
		JP 2008-510558 A	10.04.2008
		WO 2006-021932 A1	02.03.2006
US 2006-210626 A1	21.09.2006	None	
US 05279607 A	18.01.1994	EP 0662304 A1	12.07.1995
		US 05395366 A	07.03.1995
		WO 1992-021307 A1	10.12.1992