

(43) International Publication Date
16 December 2010 (16.12.2010)(10) International Publication Number
WO 2010/143091 A3

(51) International Patent Classification:

G08B 29/02 (2006.01) G08B 23/00 (2006.01)
G08B 25/08 (2006.01) G06Q 50/00 (2006.01)
G08B 21/00 (2006.01)

(21) International Application Number:

PCT/IB2010/052322

(22) International Filing Date:

25 May 2010 (25.05.2010)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/186,676 12 June 2009 (12.06.2009) US
61/243,720 18 September 2009 (18.09.2009) US

(71) Applicant (for all designated States except US): **ECO-LAB USA INC.** [US/US]; 370 N. Wabasha Street, St. Paul, Minnesota 55102 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **TOKHTUEV, Eugene** [UA/US]; 2001 Jefferson Street, Duluth, Minnesota 55812 (US). **OWEN, Christopher J.** [US/US]; 219 W. Fifth Street, Duluth, Minnesota 55806 (US). **SCHILLING, Paul S.** [US/US]; 4323 Pitt St., Duluth, Minnesota 55804 (US). **SKIRDA, Anatoly** [UA/US]; 4348 Joey Drive, Duluth, Minnesota 55811 (US). **SLOBODYAN, Viktor** [UA/US]; 5702 Juniata Street, Duluth,

Minnesota 55806 (US). **ERICKSON, Joseph P.** [US/US]; 717 Larch Street, Cloquet, Minnesota 55720 (US). **LITTAU, Cheryl A.** [US/US]; 12922 Hamlet Avenue, Apple Valley, Minnesota 55124 (US). **BUCK, Christopher A.** [US/US]; 1777 Hague Avenue, St. Paul, Minnesota 55104 (US).

(74) Agent: **SORENSEN, Andrew D.**; Ecolab Usa Inc., 655 Lone Oak Drive, Eagan, Minnesota 55121 (US).

(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, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, SE, SI, SK,

[Continued on next page]

(54) Title: HAND HYGIENE COMPLIANCE MONITORING

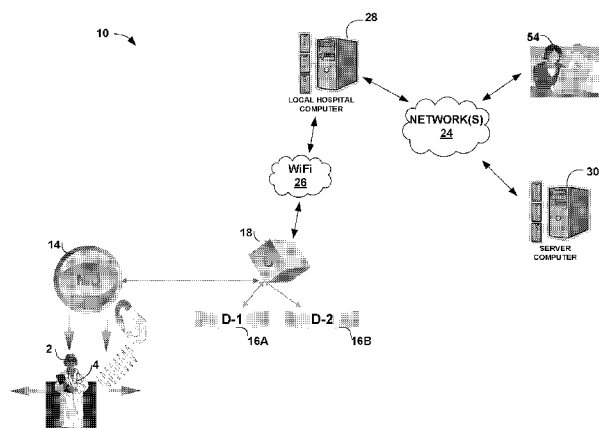


FIG. 1

(57) Abstract: A system and associated processes monitor hand hygiene compliance. The system includes hand hygiene product dispensers positioned within areas of concern (AOC) in a facility in which hand hygiene events are to be monitored. The dispensers detect dispense events initiated at the dispenser and transmit a dispense event signal indicative that a dispense event occurred along with dispenser identification information. The system also includes a plurality of compliance badges, each worn by a different person in the facility. Each compliance badge receives dispense event signals corresponding dispenser identification information associated with dispense events initiated by the wearer of the compliance badge. The badges store dispense event records associated with each dispense event initiated by the wearer and thus keep track of all dispense events initiated by the wearer of the compliance badge. One or more data gathering stations positioned at various locations through the facility receive the dispense event information from the individual badges when they come within range. The dispense event information may then be transferred to a local or remote computer for analysis and reporting on hand hygiene events taking place within the facility.



SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, (88) Date of publication of the international search report:
GW, ML, MR, NE, SN, TD, TG). 21 April 2011

Published:

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

A. CLASSIFICATION OF SUBJECT MATTER**G08B 29/02(2006.01)i, G08B 25/08(2006.01)i, G08B 21/00(2006.01)i, G08B 23/00(2006.01)i, 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)

G08B 29/02; E03C 1/05; G05B 19/00; G06F 7/00; G08B 13/14; G08B 23/00

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: hand hygiene, compliance, badge, dispenser, transmit

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2007-0257803 A1 (ANDREW D. MUNRO et al) 08 November 2007 See abstract, claims 1-31 and figure 8	1-20
A	US 2003-0030562 A1 (STEPHEN LANE et al.) 13 February 2003 See abstract, claims 1-39 and figure 1	1-20
A	US 2008-0100441 A1 (PRODANOVICH TIMOTHY et al.) 01 May 2008 See abstract, claims 1-34 and figures 2, 8	1-20
A	US 6956498 B1 (JEROME M. GAUTHIER et al.) 18 October 2005 See abstract, claims 1-20 and figure 2	1-20
A	US 6125482 A1 (FOSTER; FRANK) 03 October 2000 See abstract, claims 1-29 and figure 9	1-20



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

31 JANUARY 2011 (31.01.2011)

Date of mailing of the international search report

01 FEBRUARY 2011 (01.02.2011)

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

LEE, HYEON HONG

Telephone No. 82-42-481-8527



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/IB2010/052322

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2007-0257803 A1	08.11.2007	US 2009-237254 A1 US 7605704 B2 US 7804409 B2 WO 2007-127495 A2 WO 2007-127495 A3 WO 2007-127495 B1	24.09.2009 20.10.2009 28.09.2010 08.11.2007 09.10.2008 04.12.2008
US 2003-0030562 A1	13.02.2003	US 2005-0248461 A1 US 6975231 B2 US 7372367 B2	10.11.2005 13.12.2005 13.05.2008
US 2008-0100441 A1	01.05.2008	US 2008-099045 A1 US 2009-084407 A1 US 2010-097224 A1 US 7659824 B2 US 7682464 B2	01.05.2008 02.04.2009 22.04.2010 09.02.2010 23.03.2010
US 6956498 B1	18.10.2005	None	
US 6125482 A1	03.10.2000	EP 0616658 A1 EP 0616658 B1 EP 0616658 B2 EP 0758702 A1 GB 2304038 A GB 2328867 A GB 2328868 A WO 93-10311 A1	28.09.1994 08.10.1997 23.05.2001 19.02.1997 12.03.1997 10.03.1999 10.03.1999 27.05.1993