

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
1 March 2007 (01.03.2007)

PCT

(10) International Publication Number
WO 2007/024573 A3

(51) International Patent Classification:

G05B 11/01 (2006.01) **G06F 15/173** (2006.01)
G05B 15/00 (2006.01) **G06F 15/177** (2006.01)
G06F 15/16 (2006.01)

(21) International Application Number:

PCT/US2006/031863

(22) International Filing Date: 15 August 2006 (15.08.2006)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

11/208,773	22 August 2005 (22.08.2005)	US
11/316,410	22 December 2005 (22.12.2005)	US
11/316,695	22 December 2005 (22.12.2005)	US
11/316,702	22 December 2005 (22.12.2005)	US
11/316,698	22 December 2005 (22.12.2005)	US
11/316,703	22 December 2005 (22.12.2005)	US
11/316,697	22 December 2005 (22.12.2005)	US
11/316,687	22 December 2005 (22.12.2005)	US
11/316,699	22 December 2005 (22.12.2005)	US

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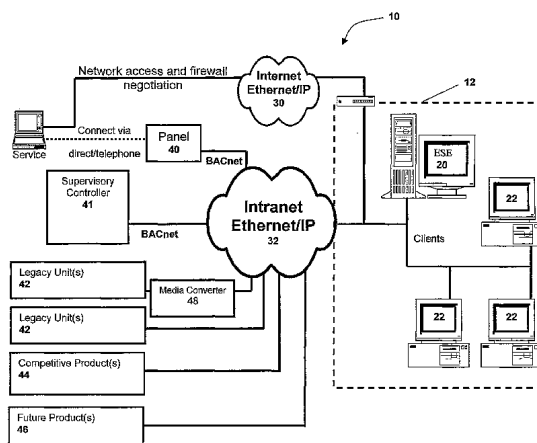
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(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP,
KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT,
LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA,
NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC,
SD, SE, SG, SK, SL, SM, 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,

[Continued on next page]

(54) Title: DYNAMICALLY EXTENSIBLE AND AUTOMATICALLY CONFIGURABLE BUILDING AUTOMATION SYSTEM AND ARCHITECTURE



(57) Abstract: A building automation system (BAS) architecture (Fig. 1, element 10) is disclosed. The BAS (Fig. 1, element 10) comprises, in one embodiment, an architecture comprising a communication network (Fig. 1, element 30 and 32) and having a dynamic extensibility capability and an automatic configuration capability; an engine (Fig. 1, element 20) communicatively coupled to the communication network; and at least one control device communicatively coupled to the communication network (Fig. 1, element 30 and 32), the control device (Fig. 1, element 42, 44, and 46) being known or unknown to the engine (Fig. 1, element 20). The engine can be adapted to selectively implement the dynamic extensibility capability to establish communications with and to control both known and unknown control devices (Fig. 1, element 42, 44, and 46). The engine can be further adapted to selectively implement the automatic configuration capability to determine at least one characteristic of both known and unknown control devices. A method of adding a control device to a building automation system (BAS) (Fig. 1, element 10) by dynamically extending and automatically configuring an architecture of the BAS is also disclosed.



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FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT,
RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:
22 May 2009

Published:

— *with international search report*

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US06/31863

A. CLASSIFICATION OF SUBJECT MATTER IPC: G05B 11/01(2006.01),15/00(2006.01);G06F 15/16(2006.01),15/173(2006.01),15/177(2006.01) USPC: 700/19,20,276;709/220,224,230 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) U.S. : 700/19,20,276;709/220,224,230 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) East																							
C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category *</th> <th style="width: 70%;">Citation of document, with indication, where appropriate, of the relevant passages</th> <th style="width: 20%;">Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>US 2006/0047787 A1 (AGARWAI et al) 02 March 2006 (02.03.2006), pg. 2, par. [0008], pg. 3, par. [0027], pgs. 2-3, par. [0025], pg. 3, par. [0027], [0030] and [0032], pgs. 3-4, par. [0033], pg. 4, par. [0035], [0036] and [0037], pg. 4-5, par. [0041], pg. 5, par. [0042], [0043] and [0046] and pg. 9, par. [0075].</td> <td>1-9,13-18 and 23 -----</td> </tr> <tr> <td>Y</td> <td>US 6,266,726 B1 (NIXON et al) 24 July 2001 (24.07.2001), col. 3, lines 40-45col. 5, lines 43-67, col. 6, lines 1-2.</td> <td>10-12,19-22 and 24</td> </tr> <tr> <td>Y</td> <td>US 5,321,603 (SCHWENKE et al) 14 June 1994 (14.06.1994), abstract, col. 2, lines 30-33, col. 4, lines 66-67, col. 5, line 1, col. 6, lines 19-26 and col. 9, lines 5-15.</td> <td>10-12</td> </tr> <tr> <td>Y</td> <td>US 2004/0243988 (OTA) 02 December 2004 (02.12.2004), pg. 2, par. [0013, pg. 7, par. [0101] and pg. 8, par. [0112].</td> <td>19</td> </tr> <tr> <td>Y</td> <td>US 2006/0184659 (MOTOYAMA et al), 17 August 2006 (17.08.2006), pg. 4, par. [0059]-[0061], pgs. 4-5, par. [0062], pg. 16, par. [0242], pg. 18, par. [0263] and [0264], pgs. 18-19, par. [0265], pg. 19, par. [0266], pg. 20, par. [0272] and pg. 29, par. [0328].</td> <td>19</td> </tr> <tr> <td>Y</td> <td></td> <td>20-22 and 24</td> </tr> </tbody> </table>			Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 2006/0047787 A1 (AGARWAI et al) 02 March 2006 (02.03.2006), pg. 2, par. [0008], pg. 3, par. [0027], pgs. 2-3, par. [0025], pg. 3, par. [0027], [0030] and [0032], pgs. 3-4, par. [0033], pg. 4, par. [0035], [0036] and [0037], pg. 4-5, par. [0041], pg. 5, par. [0042], [0043] and [0046] and pg. 9, par. [0075].	1-9,13-18 and 23 -----	Y	US 6,266,726 B1 (NIXON et al) 24 July 2001 (24.07.2001), col. 3, lines 40-45col. 5, lines 43-67, col. 6, lines 1-2.	10-12,19-22 and 24	Y	US 5,321,603 (SCHWENKE et al) 14 June 1994 (14.06.1994), abstract, col. 2, lines 30-33, col. 4, lines 66-67, col. 5, line 1, col. 6, lines 19-26 and col. 9, lines 5-15.	10-12	Y	US 2004/0243988 (OTA) 02 December 2004 (02.12.2004), pg. 2, par. [0013, pg. 7, par. [0101] and pg. 8, par. [0112].	19	Y	US 2006/0184659 (MOTOYAMA et al), 17 August 2006 (17.08.2006), pg. 4, par. [0059]-[0061], pgs. 4-5, par. [0062], pg. 16, par. [0242], pg. 18, par. [0263] and [0264], pgs. 18-19, par. [0265], pg. 19, par. [0266], pg. 20, par. [0272] and pg. 29, par. [0328].	19	Y		20-22 and 24
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.																							
<table style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> * 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 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 another 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 </td> <td style="width: 50%; vertical-align: top;"> "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 </td> </tr> </table>			* 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 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 another 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																			
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Date of the actual completion of the international search 25 February 2008 (25.02.2008)		Date of mailing of the international search report 19 MAR 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 <i>Jessie Von</i> JENNIFER L. NORTON Telephone No. 703-746-3506																					