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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,
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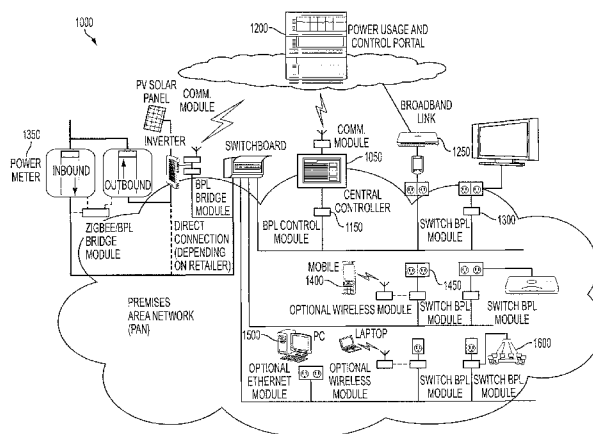
(54) Title: SYSTEMS AND METHODS FOR ENERGY MANAGEMENT AND DEVICE AUTOMATION SYSTEM

FIG. 1

(57) **Abstract:** An integrated energy management and device automation system for managing a premises electrical system having a plurality of electrical circuits. The energy management and device automation system comprises a central controller. The central controller is configured to receive, over the premises electrical system, energy usage data from a plurality of modules and module originated notifications that a module has been connected to the premises electrical system. The central controller is configured to receive and send, over the premises electrical system, messages for device automation and control from a plurality of modules. The energy management system additionally comprises a plurality of modules. Each module comprises a processor, a powerline interface operatively connected to the processor and to one of the plurality of electrical circuits and a sensor operatively connected to the electrical circuit so that the sensor can sense at least one of current and voltage. Each module is configured to collect data relating to energy usage using the sensor and to transmit the data to the central controller. The central controller uses energy usage data to identify, profile and analysis connected devices and their usage.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/023648**A. CLASSIFICATION OF SUBJECT MATTER****H02J 13/00(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)

H02J 13/00; G06F 1/28; G06F 3/048; G05B 11/01; H02J 3/18; G01R 19/06; G06F 1/32

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: control, energy, power, usage, premise, module, outlet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y A	US 2009-0045803 A1 (SCHOETTLE ROLAND) 19 February 2009 See the abstract, paragraphs [0020]-[0022], [0036]-[0041], claims 1-10, and figures 1-5.	1-2, 5-19, 22-23 3-4, 20-21
Y A	US 2010-0256828 A1 (WANG EUGENE) 07 October 2010 See the abstract, paragraphs [0021]-[0033], claims 1, 8, and figures 1-2.	1-2, 5-19, 22-23 3-4, 20-21
Y A	US 2010-0238003 A1 (CHAN TAT KEUNG et al.) 23 September 2010 See the abstract, paragraphs [0038], [0046]-[0050], [0054], [0063], [0066], [0070]-[0076], [0081]-[0087], [0127], claims 1-2, and figures 1, 3-5.	9-12, 22 1-8, 13-21, 23
Y A	US 2010-0305773 A1 (COHEN AVNER) 02 December 2010 See the abstract, paragraphs [0032]-[0037], [0042]-[0045], claims 1-6, and figures 1-2.	2 1, 3-23

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

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"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009-0045803 A1	19.02.2009	WO 2009-056988 A2 WO 2009-056988 A3	07.05.2009 28.04.2011
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