

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
29 November 2007 (29.11.2007)

PCT

(10) International Publication Number
WO 2007/136579 A3

- (51) **International Patent Classification:**
H02J 13/00 (2006.01)
- (21) **International Application Number:**
PCT/US2007/011405
- (22) **International Filing Date:** 11 May 2007 (11.05.2007)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
11/436,049 18 May 2006 (18.05.2006) US
- (71) **Applicant (for all designated States except US):** **GRID-POINT, INC.** [US/US]; 2020 K. Street, N.W., Suite 550, Washington, DC 20006 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **CORSELL, Peter, L.** [US/US]; C/o GridPoint, Inc., 2020 K Street, N.W., Suite 550, Washington, DC 20006 (US). **LEWIS, Roger, Karl** [US/US]; C/o GridPoint, Inc., 2020 K Street, N.W., Suite 550, Washington, DC 20006 (US). **GOLDEN, Brian** [US/US]; C/o GridPoint, Inc., 2020 K Street, N.W., Suite 550, Washington, DC 20006 (US).
- (74) **Agent:** **WRIGHT, Bradley, C.**; Banner & Witcoff, Ltd., 1100 13th Street N.W., Suite 1200, Washington, DC 20005-4051 (US).
- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, 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, 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, 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, HU, IE, IS, IT, LT, LU, LV, MC, MT, 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).
- Published:**
— with international search report
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments
- (88) **Date of publication of the international search report:**
7 August 2008



WO 2007/136579 A3

(54) **Title:** MODULAR ENERGY CONTROL SYSTEM

(57) **Abstract:** A wireless base unit communicates with one or more wireless load manager units to receive power measurements for one or more loads connected to the wireless load manager. In response to dynamic variables, such as the changing price of electricity, the wireless base unit transmits commands to the wireless load manager to shut off or reduce power consumed by the one or more loads. In one variation, a wireless adapter also receives commands from the wireless base unit and converts the commands into a vendor-specific format used to control other devices such as a photovoltaic (PV) inverter.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/11405

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H02J 13/00(2006.01)**

USPC: 700/295
 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. : 700/295

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)

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 6,862,498 B2 (DAVIS et al.) 01 March 2005 (01.03.2005), entire document.	1-2, 4, 6-7, 11-12, 14, 16-18, 22-23, 25 ----- 5, 10, 13, 15
Y,P	US 2007/0005195 A1 (PASQUALE et al.) 04 January 2007 (04.01.2007), paragraphs 0026-0027.	3, 24
Y	US 2003/0036820 A1 (YELLEPEDDY et al.) 20 February 2003 (20.02.2003), paragraphs 0030 and 0031.	5, 13
Y	US 6,750,391 B2 (BOWER et al.) 15 June 2004 (15.06.2004), entire document.	8-9, 26-27
Y	US 5,572,438 A (EHLERS et al) 05 November 1996 (05.11.1996), col. 8, lines 20-25, col. 31, lines 35-39	10
Y	US 4,264,960 A (GURR) 28 April 1981(28.04.1981), col. 5, lines 5-42, col. 1, lines 27-35.	15

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	"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
"E" earlier application or patent published on or after the international filing date	"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
"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)	"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
"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	"&"	document member of the same patent family

Date of the actual completion of the international search 27 May 2008 (27.05.2008)	Date of mailing of the international search report 30 MAY 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>Marianne Seidel</i> Telephone No. (571) 272-1600

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US07/11405

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 7,135,956 B2 (BARTONE et al.) 14 November 2006 (14.11.2006), col. 10, lines 1-19, col. 12, lines 19-22, col. 2, lines 25-36.	19-21
A	US 2006/0190140 A1 (SONI) 24 August 2006 (24.08.2006).	1-28
A	US 2003/0182023 A1 (PEREZ0 25 September 2003 (25.09.2003).	1-28
A	YUS 6,874,691 B1 (HILDEBRAND et al.) 05 April 2005 (05.04.2005).	1-28