

(51) International Patent Classification:
H02J 17/00 (2006.01)(21) International Application Number:
PCT/KR2012/004491(22) International Filing Date:
7 June 2012 (07.06.2012)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/494,175 7 June 2011 (07.06.2011) US
10-2012-0060595 5 June 2012 (05.06.2012) KR(71) Applicant (for all designated States except US): **SAM-SUNG ELECTRONICS CO., LTD.** [KR/KR]; 129, Samsung-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-742 (KR).(72) Inventors: **PARK, Se-Ho**; #117-203, Sinmaetan Weve Haneulchae APT., 363, Hyowon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-751 (KR). **BYUN, Kang-Ho**; #901-904, Byeokjeokgol 9-danji APT., 73, Bongyeong-ro 1517beon-gil, Yeongtong-gu, Suwon-si, Gyeonggi-do 443-726 (KR). **LEE, Kyung-Woo**; #251-503, Olympic Seon-suchon APT., 1218, Yangjae-daero, Songpa-gu, Seoul 138-787 (KR). **LEE, Young-Min**; #1311-1201, Raemian East

Palace, 7, Dongcheon-ro 153beon-gil, Suji-gu, Yongin-si, Gyeonggi-do 448-911 (KR).

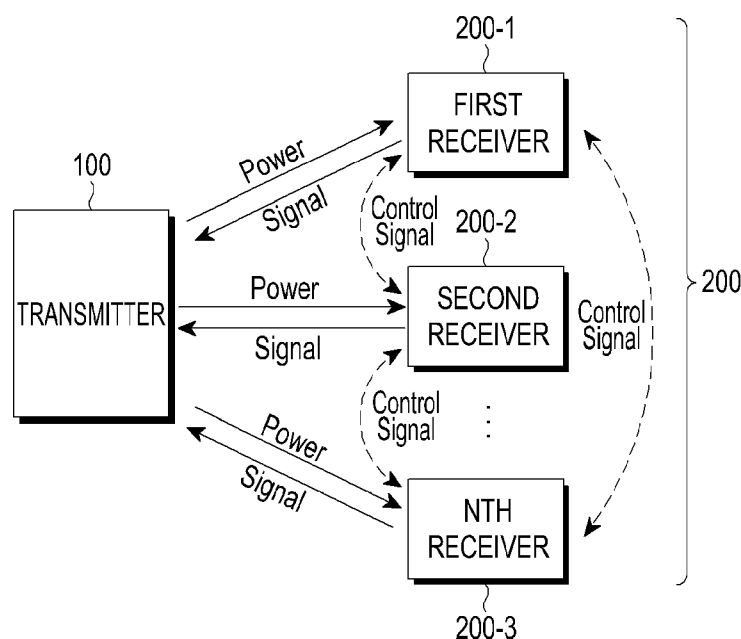
(74) Agent: **LEE, Keon-Joo**; Mihwa Bldg., 110-2, Myongryundong 4-ga, Chongro-gu, Seoul 110-524 (KR).

(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, 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, QA, RO, RS, RU, RW, 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, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR CONTROLLING WIRELESS POWER OF A RECEIVER IN A WIRELESS POWER TRANSMISSION / RECEPTION SYSTEM



(57) Abstract: A method and apparatus are provided for controlling power of a receiver in a wireless power transmission/reception system, wherein a wireless power quantity supplied to receivers from a transmitter is controlled through communication between the receivers. The method includes receiving required power information transmitted from a joining receiver in a charging area of a transmitter; determining whether the transmitter is capable of supplying required power to the joining receiver based on the required power information; and requesting the joining receiver to maintain a standby state, when the transmitter is not capable of supplying the required power to the joining receiver.

WO 2012/169795 A3



Published:

(88) Date of publication of the international search report:

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

7 March 2013

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2012/004491**A. CLASSIFICATION OF SUBJECT MATTER****H02J 17/00(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 17/00; H02J 7/00; H02J 11/00

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: wireless power, standby, remaining power

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 10-2010-0083846 A (QUALCOMM INCORPORATED) 22 July 2010 See the abstract; claim 22.	1-14
A	KR 10-1034740 B1 (URND CO., LTD.) 17 May 2011 See the abstract; claim 1.	1-14
A	KR 10-2009-0056545 A (JUNG, CHUN KIL) 03 June 2009 See the abstract; claim 5.	1-14
A	KR 10-2010-0134843 A (PT&K CO., LTD.) 24 December 2010 See the abstract; claim 1.	1-14

☐ 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

30 NOVEMBER 2012 (30.11.2012)

Date of mailing of the international search report

30 NOVEMBER 2012 (30.11.2012)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
189 Cheongsa-ro, Seo-gu, Daejeon Metropolitan
City, 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

WEE Jae Woo

Telephone No. 82-42-481-8540



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR2012/004491

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2010-0083846 A	22.07.2010	CN 101911029 A EP 2223222 A2 JP 2011-508578 A US 2009-0127937 A1 WO 2009-065099 A2 WO 2009-065099 A3	08.12.2010 01.09.2010 10.03.2011 21.05.2009 22.05.2009 22.05.2009
KR 10-1034740 B1	17.05.2011	None	
KR 10-2009-0056545 A	03.06.2009	CN 101447683 A EP 2066001 A2 JP 2009-136133 A KR 10-0971734 B1 KR 10-0998683 B1 US 2009-0140691 A1 US 8102147 B2 WO 2009-069844 A1	03.06.2009 03.06.2009 18.06.2009 21.07.2010 07.12.2010 04.06.2009 24.01.2012 04.06.2009
KR 10-2010-0134843 A	24.12.2010	None	