



(51) International Patent Classification:  
*H04W 36/18* (2009.01) *H04L 12/28* (2006.01)  
*H04W 84/18* (2009.01)

(21) International Application Number:  
PCT/US2010/044169

(22) International Filing Date:  
2 August 2010 (02.08.2010)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
12/535,584 4 August 2009 (04.08.2009) US

(71) Applicants (for all designated States except US): **SONY CORPORATION** [JP/JP]; 1-7-1 Konan, Minato-ku, Tokyo, 108-0075 (JP). **SONY ELECTRONICS INC.** [US/US]; 1 Sony Drive, Park Ridge, NJ 07656 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **PATIL, Abhishek** [IN/US]; 8550 Costa Verde Blvd., #5435, San Diego, CA 92122 (US). **JING, Xiangpeng** [CN/US]; 13550 Chaco Ct., San Diego, CA 92129 (US). **LIU, Aixin** [CN/US]; 10980 Ivy Hill Drive, Unit 6, San Diego, CA 92127 (US). **NGUYEN, Djung, N.** [US/US]; 13731 Trento Place, San Diego, CA 92130 (US).

(74) Agents: **VINCENT, Lester, J.** et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 1279 Oakmead Parkway, Sunnyvale, CA 94085-4040 (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, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

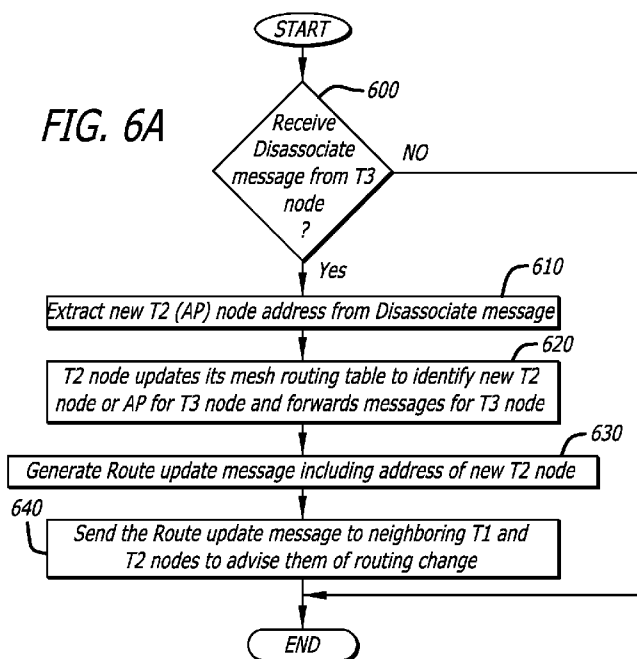
Published:

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

[Continued on next page]

(54) Title: SYSTEM, APPARATUS AND METHOD FOR SEAMLESS ROAMING THROUGH THE USE OF ROUTING UPDATE MESSAGES

FIG. 6A



(57) Abstract: According to one embodiment of the invention, a method for managing seamless roaming of a wireless node of a plurality of nodes forming a wireless network comprises detecting, recovering and transmitting operations. The detecting operation involves detecting receipt of a Disassociation message from the wireless node by a first node of the plurality of nodes. The wireless node is roaming and seeking to establish a new communication with a second node of the plurality of nodes. The recovering operation involves addressing information from the Disassociation message by the first node, where the addressing information identifies the second node of the plurality of nodes. The transmitting operation involves transmitting a Route Update message to at least the second node of the plurality of nodes. Other embodiments are described and claimed.



---

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

19 May 2011

**A. CLASSIFICATION OF SUBJECT MATTER*****H04W 36/18(2009.01)i, H04W 84/18(2009.01)i, H04L 12/28(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)

H04W 36/18; H04Q 7/00; H04Q 7/38; H04L 9/06; H04Q 7/20

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) &amp; Keywords: handover, association, address, message, MAC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008-0192696 A1 (JOACHIM SACHS et al.) 14 August 2008 See the abstract, [0097]-[0107] of specifications, and figures 4A-4B	1-15
X	US 2008-0205345 A1 (JOACHIM SACHS et al.) 28 August 2008 See the abstract, [0170]-[0201] of specifications, and figures 6A-6F	1-15
A	US 2008-0267407 A1 (MICHAELA VANDERVEEN) 30 October 2008 See the abstract, [0064]-[0075] of specifications, and figures 2A-2C	1-15
A	EP 1696689 A1 (KIN K. LEUNG et al.) 30 August 2006 See the abstract, [0034]-[0041] of specifications, and figure 4	1-15



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

"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

"&amp;" document member of the same patent family

Date of the actual completion of the international search

25 FEBRUARY 2011 (25.02.2011)

Date of mailing of the international search report

**28 FEBRUARY 2011 (28.02.2011)**

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

KIM, JONG KWON

Telephone No. 82-42-481-8584



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/US2010/044169**

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2008-0192696 A1	14.08.2008	CA 2614287 A1 EP 1911312 A1 JP 2009-503991 A US 2008-192696 A1 WO 2007-013839 A1	01.02.2007 16.04.2008 29.01.2009 14.08.2008 01.02.2007
US 2008-0205345 A1	28.08.2008	EP 1251424 A2 EP 1251424 A3 EP 1929815 A1 EP 2222117 A2 JP 2002-312689 A RU 2008117105 A RU 2384020 C2 US 2002-0152143 A1 US 2003-0195826 A1 US 2004-0107148 A1 US 2005-0171929 A1 US 2005-0177548 A1 US 2008-205345 A1 US 6868398 B2 US 6889204 B2 US 7440925 B2 US 7574559 B2 WO 2007-036764 A1	23.10.2002 28.03.2007 11.06.2008 25.08.2010 25.10.2002 10.11.2009 10.03.2010 17.10.2002 16.10.2003 03.06.2004 04.08.2005 11.08.2005 28.08.2008 15.03.2005 03.05.2005 21.10.2008 11.08.2009 05.04.2007
US 2008-0267407 A1	30.10.2008	AU 2008-245604 A1 CA 2682813 A1 CN 101669379 A EP 2143236 A1 EP 2184933 A2 IL 201413D0 JP 2010-525764 A KR 10-2010-0007913 A MX 2009011374 A TW 200910826 A US 2008-267407 A1 WO 2008-134564 A1	06.11.2008 06.11.2008 10.03.2010 13.01.2010 12.05.2010 31.05.2010 22.07.2010 22.01.2010 09.11.2009 01.03.2009 30.10.2008 06.11.2008
EP 1696689 A1	30.08.2006	CN 1826013 A DE 602006000095 D1 DE 602006000095 T2 EP 1696689 B1 JP 2006-238451 A JP 2006-238451 A KR 10-2006-0094911 A US 2006-0194579 A1	30.08.2006 18.10.2007 05.06.2008 05.09.2007 07.09.2006 07.09.2006 30.08.2006 31.08.2006