

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
23 March 2006 (23.03.2006)

PCT

(10) International Publication Number
WO 2006/031927 A3

- (51) International Patent Classification:
H04Q 7/20 (2006.01)
- (21) International Application Number:
PCT/US2005/032834
- (22) International Filing Date:
15 September 2005 (15.09.2005)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/610,111 15 September 2004 (15.09.2004) US
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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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, 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, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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, 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

(88) Date of publication of the international search report:
4 June 2009



WO 2006/031927 A3

(54) Title: METHODS, SYSTEMS, AND COMPUTER PROGRAM PRODUCTS FOR PROVIDING WIRELESS-FIDELITY (WI-FI) GATEWAY VISITOR LOCATION REGISTER (VLR) FUNCTIONALITY

(57) Abstract: Methods, Systems, and Computer Program Products for Providing Wireless-Fidelity (Wi-Fi) Gateway Visitor Location Register (VLR) Functionality. A method is disclosed herein for providing Wi-Fi gateway VLR functionality for an access point in a Wi-Fi network. The steps of the method can occur at a Wi-Fi gateway VLR that can perform VLR functions for at least one access point in a Wi-Fi network. The VLR functions can include receiving a registration request from a subscriber located in a service area of an access point in the Wi-Fi network. Further, the VLR functions can include authenticating the subscriber with a home location register (HLR) associated with the cellular network. The VLR functions can also include receiving information associated with the subscriber from the HLR. The Wi-Fi gateway VLR can store the information associated with the subscriber and maintain Wi-Fi reachability information for sending media packets to the subscriber in the Wi-Fi network.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/32834

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

- 1. Claims Nos.: 46-73
because they relate to subject matter not required to be searched by this Authority, namely:
Please See Continuation Sheet
- 2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
- 3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

- 1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
 - 2. As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of any additional fees.
 - 3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
 - 4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
- Remark on Protest**
- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
 - The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
 - No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/32834

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H04Q 7/20(2006.01)**

 USPC: 455/445,440
 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. : 455/445,440

 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	2006/0052113 A1 (OPHIR et al.) 10 August 2005, par. [0090,0150,0067]	1-73

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

* Special categories of cited documents:		"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
"A" document defining the general state of the art which is not considered to be of particular relevance		"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
"E" earlier application or patent published on or after the international filing date		"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
"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)		"&" document member of the same patent family
"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		

Date of the actual completion of the international search 06 June 2008 (06.06.2008)	Date of mailing of the international search report 11 JUL 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>Charles Appiah</i> Telephone No. (571) 272-8518 <i>Raven S. Ward</i>

Box II Observations where certain claims were found unsearchable 1. because they relate to subject matter not required to be searched by this Authority, namely:

1. *Claims 46-73* are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. According to the "*Interim Guidelines of Examining Patent Application for Patent Subject Matter Eligibility*" pp. 20-22, the Examiner has determined that the final result of the claimed language fails to provide a "tangible" result. Although the computer program product is claimed to be embodied in a computer readable medium, the Applicant continues to claim the steps of the program. Therefore, based on the broadest, most reasonable interpretation of the claimed language, the steps are considered to be abstract and merely teach of a disembodied algorithm; thus failing to provide a "tangible" result. Appropriate correction is required