

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
2 February 2006 (02.02.2006)

PCT

(10) International Publication Number
WO 2006/012554 A3

(51) International Patent Classification:
H04Q 7/20 (2006.01)

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(21) International Application Number:
PCT/US2005/026151

(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, 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.

(22) International Filing Date: 22 July 2005 (22.07.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/590,518 23 July 2004 (23.07.2004) US
60/648,481 31 January 2005 (31.01.2005) US

(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).

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Published:

— with international search report

(88) Date of publication of the international search report:
9 April 2009

(54) Title: SYSTEM, METHOD, AND APPARATUS FOR DETERMINING AND USING THE POSITION OF WIRELESS DEVICES OR INFRASTRUCTURE FOR WIRELESS NETWORK ENHANCEMENTS

(57) Abstract: A system and method for estimating the position of wireless devices within a wireless communication network combines measured RF channel characteristics for the wireless device with one or more predicted performance lookup tables, each of which correlates an RF channel characteristic to some higher order network performance metric and/or a position within an environmental model. Measured RF channel characteristics for wireless devices are compared against the performance lookup tables to determine the sent of lookup tables that most closely match the measured RF channel characteristics. The positions within the environmental model corresponding to the selected set of matching lookup tables are identified as possible locations for the wireless device. The performance lookup tables are uniquely constructed by site-specific location, technology, wireless standard, and equipment types, and/or the current operating state of the communications network.



WO 2006/012554 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/26151

A. CLASSIFICATION OF SUBJECT MATTER IPC: H04Q 7/20(2006.01) USPC: 455/456.1,452.1,452.2,456.3,440,446 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. : 455/456.1,452.1,452.2,456.3,440,446 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		
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Date of the actual completion of the international search 05 June 2008 (05.06.2008)		Date of mailing of the international search report 05 SEP 2008	
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US05/26151

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	R. Skidmore et al. SMT Plus 1.0 User's Manual Virginia Tech, August 1996, Copyright	claims 1, 30, 59, 71, 83, 93, 105, 111, 118, and 124 are recited in pg. 2, Par. 2, pg. 9, Par. 2, Pg.25-26, sections 5.2-5.3, Pg. 43, Pg. 20-24, sections 4.3-4.4, Pg. 26, section 5.3, Pg. 29-32, Pg. 27-30. Claims 2- 29, 31-58, 60-70, 72- 82, 84-92, 94-104, 106-110, 112-117, 119-123, and 125-131 cited pages 9, 11, 12, 14-18, 20-26, 28-35.