

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 February 2008 (21.02.2008)

PCT

(10) International Publication Number
WO 2008/022076 A3

(51) International Patent Classification:

H04L 12/50 (2006.01)	H04M 3/00 (2006.01)
H04Q 11/00 (2006.01)	G06F 15/16 (2006.01)
H04Q 7/20 (2006.01)	G06F 17/50 (2006.01)
H04B 7/00 (2006.01)	G06G 7/48 (2006.01)
H04B 7/185 (2006.01)	G08B 5/22 (2006.01)
H04B 17/00 (2006.01)	G01S 3/02 (2006.01)
H04M 11/00 (2006.01)	

(21) International Application Number:

PCT/US2007/075814

(22) International Filing Date: 13 August 2007 (13.08.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/464,730 15 August 2006 (15.08.2006) US

(71) Applicant (for all designated States except US):

VERISIGN, INC. [US/US]; 487 East Middlefield Road, Mountain View, California 94043 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KOTA, Sekhar** [IN/US]; 9645 Scranton Road, Suite 110, San Diego, California 92121 (US). **CRICK, Todd** [CA/US]; 9645 Scranton Road, Suite 110, San Diego, California 92121 (US). **DUNN, Michael** [US/US]; 9645 Scranton Road, Suite 110, San Diego, California 92121 (US).

(74) Agent: **SZEPESI, Judith A.**; Blakely, sokoloff, taylor & Zafman, LLP, 1279 Oakmead Parkway, Sunnyvale, California 94085-4040 (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, 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, 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.

[Continued on next page]

(54) Title: EMBEDDED WIRELESS LOCATION VALIDATION BENCHMARKING SYSTEMS AND METHODS

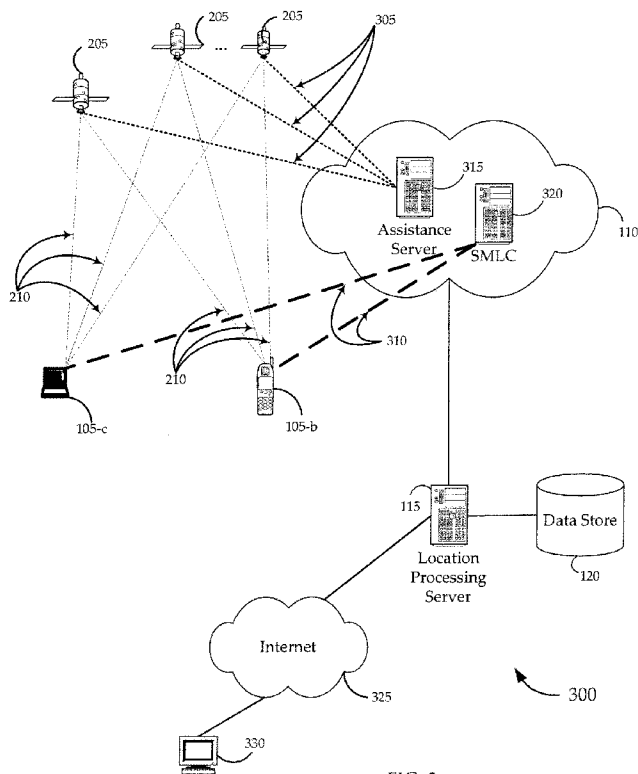


FIG. 3

(57) Abstract: Systems, methods and software are described for benchmarking the location determination capabilities of a wireless communications network (110). A mobile communications device (115) is configured to receive data identifying a reference location for the device (105). A communication network, communicatively coupled with the mobile communications device (115), calculates a computed location for the device using an alternative location determination technique. The reference location and computed location may be determined for any number of additional devices (105), as well. The accuracy and reliability of a system may then be assessed by comparing one or more computed locations with associated reference locations. The latency attributable to the calculation of one or more computed locations may also be determined.

WO 2008/022076 A3



(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*

(88) **Date of publication of the international search report:**
25 September 2008

(15) **Information about Correction:**

Previous Correction:

see Notice of 7 August 2008

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US07/75814

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **H04L 12/50**(2006.01);**H04Q 11/00**(2006.01);**7/20**(2006.01);**H04B 7/00**(2006.01);**7/185**(2006.01);**17/00**(2006.01);**H04M 11/00**(2006.01);**3/00**(2006.01);**G06F 15/16**(2006.01);**17/50**(2006.01);**G06G 7/48**(2006.01);**G08B 5/22**(2006.01);
G01S 3/02(2006.01)

USPC: 455/423,456,420,446,456,427,67.13,41.2,12.1;709/223,224;379/101.01;342/465;340/825.72,825.36
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. : 455/423, 456, 420, 446, 456, 427,67.13, 41.2, 12.1; 709/223, 224; 379/101.01; 342/465; 340/825.72, 825.36

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)
West Search Tool

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/0054835 A1 (GUTOWSKI et al) 20 March 2003 (20.03.2003), entire document	1-36
A	US 2003/0054834 A1 (GUTOWSKI et al) 20 March 2003 (20.03.2003), entire document.	1-36
A	US 2002/0094785 A1 (DEATS) 18 July 2002 (18.07.2002), entire document.	1-36
A	US 2004/0203897 A1 (ROGERS) 14 October 2004 (14.10.2004), entire document.	1-36
A	US 2007/0287473 A1 (DUPRAY) 13 December 2007 (13.12.2007), entire document.	1-36
A	US 2006/0022800 A1 (KRISHNA et al) 02 February 2006 (02.02.2006), entire document.	1-36
A	US 7,315,800 B2 (MEINERS et al) 01 January 2008 (01.01.2008), entire document	1-36

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 15 May 2008 (15.05.2008)	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 Wing Chan Telephone No. 571-272-7493 <i>Ronan A. Ward</i>