(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
13 September 2007 (13.09.2007)

PCT

(10) International Publication Number
WO 2007/103624 A3

(51) International Patent Classification:
G01S 1/00 (2006.01) *G01S 3/16* (2006.01)
G01S 5/14 (2006.01) *G01S 3/28* (2006.01)
G01S 5/00 (2006.01) *H04B 7/185* (2006.01)
G01S 5/02 (2006.01)

(21) International Application Number:
PCT/US2007/062316

(22) International Filing Date:
16 February 2007 (16.02.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/367,144 3 March 2006 (03.03.2006) US

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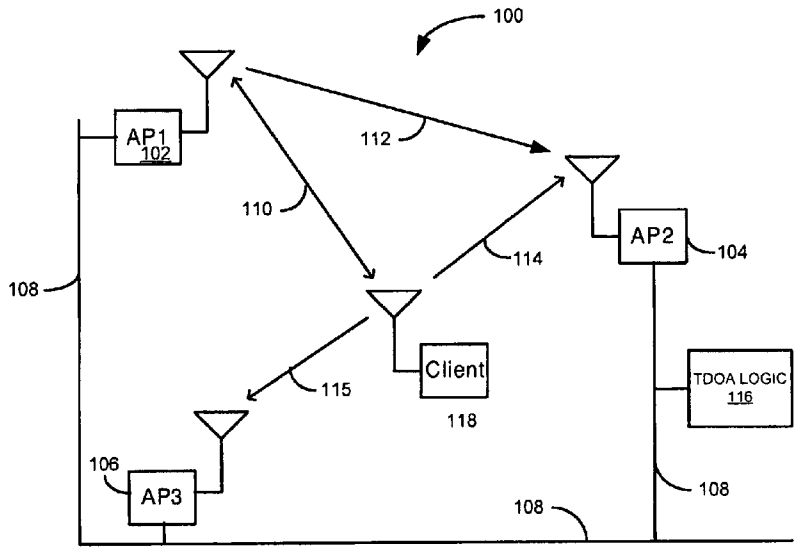
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, 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.

(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*

[Continued on next page]

(54) Title: SYSTEM AND METHOD FOR PERFORMING TIME DIFFERENCE OF ARRIVAL LOCATION WITHOUT REQUIRING A COMMON TIME BASE OR CLOCK CALIBRATION



(57) Abstract: A method for performing Time Difference Of Arrival (TDOA) that eliminates the need for a common time base or clock calibration and a system for implementing the method. The method relies on a packet transmitted from a reference wireless device (first wireless device) with a known propagation delay between the first wireless device and a second device, which serves as a common reference point for all TDOA estimates. When a packet is received from a wireless device by the first wireless device and the second wireless device, the time difference of arrival is computed based on when the signal was received by the first device and the second device, using the known propagation delay to compensate for differences in clocks and frequencies between the first wireless device and the second wireless device.

WO 2007/103624 A3

(88) Date of publication of the international search report:
26 February 2009

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US07/62316

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **G01S 1/00**(2006.01),**5/14**(2006.01),**5/00**(2006.01),**5/02**(2006.01),**3/16**(2006.01),**3/28**(2006.01);**H04B 7/185**(2006.01)

USPC: 342/357.01-17,380

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. : 342/357.01-17, 380

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)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/0280578 A1 (BOYD) 22 December 2005, see Fig. 2; para. 0034 and 0009.	1-16

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

* Special categories of cited documents:

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Date of the actual completion of the international search
02 October 2008 (02.10.2008)

Date of mailing of the international search report
09 DEC 2008

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Continuation of B. FIELDS SEARCHED Item 3:
EAST: US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB: propagation, delay, clock, error, unsynchronized, oscillator, packet, AP, access point, known, difference, TOA, TDOA, lyon-daniel.