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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

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(54) Title: METHOD AND APPARATUS FOR DETERMINING LOCATION OF A BASE STATION USING A PLURALITY OF MOBILE STATIONS IN A WIRELESS MOBILE NETWORK

(57) Abstract: A method and apparatus for determining a position of a base station in a wireless communication network that includes a mobile station in communication with base stations. A BTS calibration server is networked with the base stations. A BTS calibration program is programmed into a group of mobile stations that have position location capabilities. Using the BTS calibration program, calibration information may be requested by the BTS calibration server, or a session may be initiated by the mobile station. The BTS calibration program also provides privacy features that allow user of the mobile station to prevent it from being used for base station location. If authorized, the BTS calibration program determines the position of the mobile station, and provides calibration information, such as position and base station phase measurements, to the server. The calibration information may be used to calibrate the base station almanac.



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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/22090

A. CLASSIFICATION OF SUBJECT MATTER

IPC: **H04Q 7/20(2006.01)**

USPC: 455/423

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, 456.1, 456.2, 404.2, 456.3, 517-519, 410, 411

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,E --- Y,E	US 2005/0227689 A1 (JEWETT) 13 October 2005(10.13.2005), see entire document.	1, 6-12, 15-24, 27 and 29-33
Y,E --- A	US 2005/0191991 A1 (OWEN et al.) 01 September 2005(09.01.2005), see entire document.	2, 13, 14, 25 and 28 2 and 25
Y,E --- A	US 2005/0181805 A1 (GALLAGHER) 18 August 2005(09.18.2005), see entire document.	3-5 and 26 13 and 14 3-5 and 26

Further documents are listed in the continuation of Box C.

See patent family annex.

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"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
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"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

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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y --- A	US 2003/0144006 A1 (JOHANSSON et al) 31 July 2003(07.31.2003), see entire document.	28 ----- 3-5 and 26

INTERNATIONAL SEARCH REPORT

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Continuation of B. FIELDS SEARCHED Item 3:

EAST: (basestation, wireless, mobile, portable, movable, cellular user UT subscriber, phone PDA terminal MT device unit user UT subscriber, (base software application) program, almanac, position, access point, with stallite