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Ridge Court, San Diego, CA 92131 (US). JACOBS, Paul; 9075 La Jolla Shores Lane, San Diego, CA 92037 (US).

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(74) Agents: WADSWORTH, Philip, R. et al.; Qualcomm Incorporated, 5775 Morehouse Drive, San Diego, CA 92121 (US).

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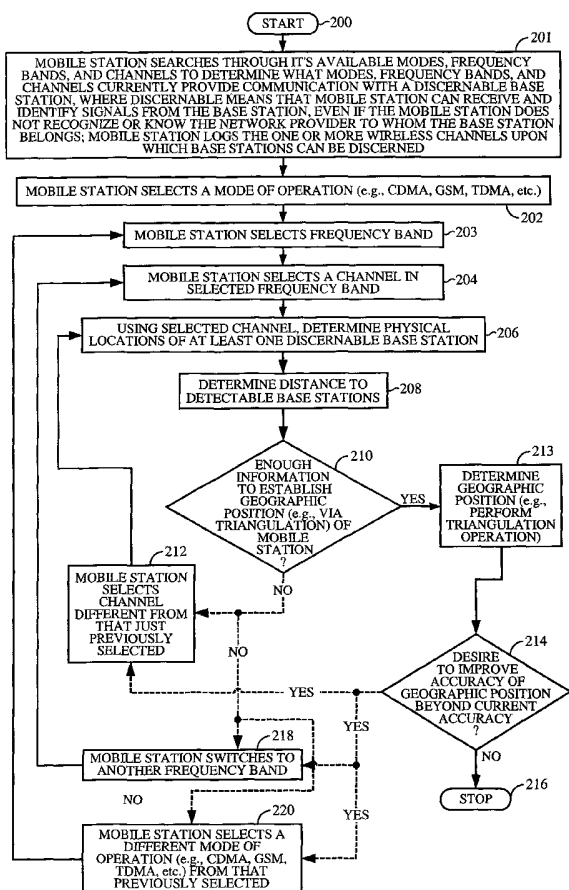
(71) Applicant: QUALCOMM INCORPORATED [US/US]; 5775 Morehouse Drive, San Diego, CA 92121 (US).

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(72) Inventors: GLAZKO, Serguei; 5156 Seashell Place, San Diego, CA 92130 (US). JHA, Sanjay, K.; 12386 Sycamore

[Continued on next page]

(54) Title: MOBILE STATION LOCATION



(57) Abstract: A method for localizing a mobile station, which in one embodiment is characterized by: logging one or more wireless channels which belong to one or more network providers other than the mobile station's home network provider and which substantially currently provide communication with one or more discernable base stations; and establishing a geographic position of the mobile station by use of the one or more wireless channels which belong to the one or more network providers other than the mobile station's home network provider. In one or more various embodiments, related systems include but are not limited to circuitry and/or programming for effecting the foregoing referenced method embodiment; the circuitry and/or programming can be virtually any combination of hardware, software, and/or firmware configured to effect the foregoing referenced method embodiment depending upon the design choices of the system designer.

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SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

CORRECTED VERSION

International Application No

PCT/US 03/31092

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H04Q7/38 G01S5/14

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)

IPC 7 H04Q G01S

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 practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	WO 02/082850 A (KONINKL PHILIPS ELECTRONICS NV) 17 October 2002 (2002-10-17) abstract; figures 1,2 page 5, line 5 - line 27	1, 16, 20, 27, 40, 43, 46
P, A		2-15, 17-19, 21-26, 28-31, 41, 42, 44, 45, 47-51

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents:

A document defining the general state of the art which is not considered to be of particular relevance

E earlier document but published on or after the international filing date

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)

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

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

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

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.

Z document member of the same patent family

Date of the actual completion of the international search

12 October 2004

Date of mailing of the international search report

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Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Danielidis, S

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 03/31092

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/10538 A (DUPRAY DENNIS JAY ; LEBLANC FREDERICK W (US); KARR CHARLES L (US)) 12 March 1998 (1998-03-12) abstract; figures 1,3,5,29 page 31, line 3 - line 28 page 32, line 8 - page 33, line 2 page 49, line 9 - line 23; tables sp-4	1,16,20, 27,40, 43,46
Y	*Idem*	32-39
A	*Idem*	2-15, 17-19, 21-26, 28-31, 41,42, 44,45, 47-51
Y	----- US 6 393 294 B1 (PEREZ-BREVA LUIS ET AL) 21 May 2002 (2002-05-21) abstract; figures 9,10 column 3, line 4 - line 21 column 4, line 45 - line 62 column 5, line 58 - line 5	32-39
P,X	----- DE 101 42 954 A (IVU TRAFFIC TECHNOLOGIES AG) 3 April 2003 (2003-04-03) abstract; figure 1 column 3, line 23 - column 4, line 23	1,16,20, 27,40, 43,46
P,X	----- GB 2 383 215 A (SAMSUNG ELECTRONICS CO LTD) 18 June 2003 (2003-06-18) abstract; claims 1-39; figures 1,4	1,16,20, 27,40, 43,46
A	----- US 5 974 328 A (LEE WILLIAM CHIEN-YEH ET AL) 26 October 1999 (1999-10-26) abstract; figure 4 column 6, line 40 - line 63 column 7, line 26 - line 43	1,16,20, 27,40, 43,46
A	----- EP 1 175 119 A (NOKIA MOBILE PHONES LTD) 23 January 2002 (2002-01-23) abstract; figures 1,5 column 2, line 9 - line 23 column 6, line 24 - line 42	1,16,20, 27,40, 43,46

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 03/31092

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

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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

see additional sheet

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 an additional fee, this Authority did not invite payment of any additional fee.

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.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-31, 40-51

Positioning a multimode mobile terminal. The terminal performs scanning of all control channels (of the networks) which means it changes modes in order to scan for networks of different technologies (GSM, UMTS etc.). Use of triangulation for different sets of base stations (whose geographic coordinates are presumably known) enhances the accuracy of the mobile positioning.

2. claims: 32-39

Requesting geographic information for a base station that belongs to an unknown (to the particular mobile) service provider and supply of the requested information from a trusted third party.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/31092

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