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AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, 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, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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(54) Title: THRESHOLD DETERMINATION IN TDOA-BASED POSITIONING SYSTEM

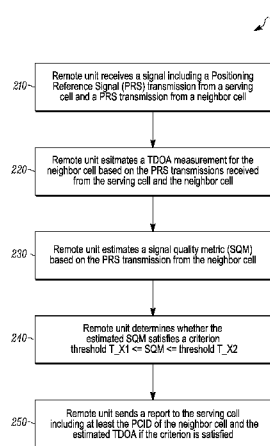


FIG. 2

(57) Abstract: A method in a wireless communication terminal including receiving a signal comprising at least a Positioning Reference Signal (PRS) transmission from a serving cell and a PRS transmission from a neighbor cell, estimating a signal quality metric (SQM) based on the PRS transmission from the neighbor cell, estimating a time difference of arrival (TDOA) measurement for the neighbor cell based on the PRS transmissions, determining if the estimated SQM satisfies a criterion, and sending a report to the serving cell that includes at least the estimated TDOA if the criterion is satisfied.

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**INTERNATIONAL SEARCH REPORT**

International application No  
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**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. G01S5/02 H04W64/00 G01S5/10  
 ADD.  
 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)  
 G01S H04W

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.
Y	Nortel: "Simulation results on UE positioning using positioning reference signals", 3GPP TSG-RAN WG1 57  4 May 2009 (2009-05-04), XP002637955, San Francisco Retrieved from the Internet: URL:http://ftp.3gpp.org/specs/html-info/TDocExMtg--R1-57--27292.htm [retrieved on 2011-05-19]	1-6
A	paragraph [0001] paragraph [03.1] paragraph [0004]  ----- -/--	7-22

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 document but 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	"&" document member of the same patent family
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search  11 August 2011	Date of mailing of the international search report  19/08/2011
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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, Fax: (+31-70) 340-3016	Authorized officer  Renaudie, Cécile
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## INTERNATIONAL SEARCH REPORT

International application No

PCT/US2011/025607

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	"3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Stage 2 functional specification of User Equipment (UE) positioning in UTRAN (Release 8)", 3GPP STANDARD; 3GPP TS 25.305, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, no. V8.1.0, 1 December 2008 (2008-12-01), pages 1-79, XP050367438, paragraph [0009] -----	1-6
Y	NORTEL: "Discussions on UE positioning issues", 3GPP DRAFT; R1-091911(NORTEL-DISCUSS-UE-POSITION), 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, no. San Francisco, USA; 20090505, 5 May 2009 (2009-05-05), XP050339399, [retrieved on 2009-05-05] paragraph [03.1] -----	2
Y	MOTOROLA: "Positioning Subframe Muting for OTDOA Measurements", 3GPP DRAFT; R1-093406, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, no. Shenzhen, China; 20090824, 24 August 2009 (2009-08-24), XP050388129, [retrieved on 2009-08-22] paragraph [0001] -----	5
A	WO 99/21389 A1 (ERICSSON TELEFON AB L M [SE]) 29 April 1999 (1999-04-29) pages 3, 4 -----	7-22

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US2011/025607

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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 No. III Observations where unity of invention is lacking (Continuation of item 3 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 fees, this Authority did not invite payment of additional fees.
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 and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- 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: 1-6

Reducing processor load of the wireless communication terminal.

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2. claims: 7-22

Thresholding of the signal quality metric.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2011/025607

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9921389	A1	29-04-1999	
		AU 750505 B2	18-07-2002
		AU 9562998 A	10-05-1999
		BR 9814826 A	03-10-2000
		CA 2308163 A1	29-04-1999
		CN 1282500 A	31-01-2001
		GB 2346516 A	09-08-2000
		US 6154657 A	28-11-2000
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