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[Continued on next page]

(54) Title: STORING LOCATION INFORMATION TO LOCATE A FEMTO CELL AT A USER EQUIPMENT DATABASE

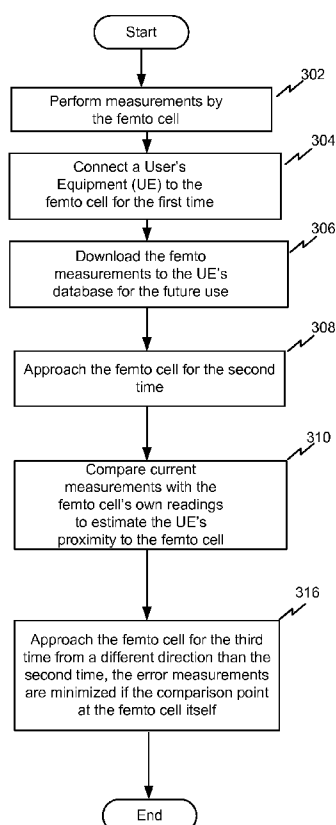


FIG. 3

(57) Abstract: A system, method and computer product for augmenting a user's equipment (UE) database with information measured by a femto cell, the method comprising: (a) performing RF measurements by a femto cell to determine a location of the femto cell; (b) connecting the UE to the femto cell; (c) downloading the RF measurements taken by the femto cell into the UE database. In a different embodiment, radio frequency, RF, measurements of a plurality of UEs to determine the location of a femto cell are sent to a server which averages the location of the femto cell. The average location is download to the UE database. In another embodiments, RF measurements corresponding to neighboring macro cells at the time when the UE receives a strongest signal from a femto cell are stored, RF measurements of a macro-cell phase offset are performed and information about changes in macro cell environment is download into the UE database.



FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL,
NO, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG,
CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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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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INTERNATIONAL SEARCH REPORT

International application No

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A. CLASSIFICATION OF SUBJECT MATTER

INV. H04W64/00

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)

H04W G01S G06F

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, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2005/009521 A1 (PREECE SCOTT E [US]) 13 January 2005 (2005-01-13)	1,3-5, 7-9, 11-13, 15,16
Y	paragraphs [0012], [0013], [0015] - [0017], [0021]	2,6,10, 14
Y	US 2003/073438 A1 (FUKUSHIMA KAZUYA [JP] ET AL) 17 April 2003 (2003-04-17) abstract paragraphs [0011], [0013], [0015], [0039], [0042], [0044], [0061], [0093] - [0099]	2,6,10, 14
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Further documents are listed in the continuation of Box C.



See patent family annex.

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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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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.

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INTERNATIONAL SEARCH REPORT

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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A	US 2007/184845 A1 (TRONCOSO EDMUND R [US]) 9 August 2007 (2007-08-09) abstract paragraphs [0023], [0025], [0037] - [0040], [0042] - [0047], [0051] - [0054] -----	1-16
Y	US 2007/002813 A1 (TENNY NATHAN E [US] ET AL) 4 January 2007 (2007-01-04) paragraphs [0018], [0029], [0090], [0091], [0101], [0148], [0149] figure 12 -----	17-28
Y	US 2006/148486 A1 (KIM JIN-KYEONG [KR] ET AL) 6 July 2006 (2006-07-06) paragraphs [0015], [0017], [0018], [0036], [0043], [0051] figures 2,6 -----	17-28
A	US 2007/121560 A1 (EDGE STEPHEN W [US]) 31 May 2007 (2007-05-31) paragraphs [0008] - [0010], [0034] - [0041], [0063] - [0093] -----	17-28
A	US 2004/203864 A1 (DIBUDUO MARCUS [US]) 14 October 2004 (2004-10-14) abstract paragraphs [0016], [0022], [0037], [0038], [0055], [0058] - [0061] -----	29-38
A	US 2006/009235 A1 (SHEYNBLAT LEONID [US] ET AL) 12 January 2006 (2006-01-12) abstract paragraphs [0006] - [0017], [0095] - [0108] -----	29-38
A	US 2006/106850 A1 (MORGAN EDWARD J [US] ET AL MORGAN EDWARD JAMES [US] ET AL) 18 May 2006 (2006-05-18) abstract paragraphs [0019], [0041], [0042], [0054] - [0060] figure 1 -----	29-38
A	US 2007/004428 A1 (MORGAN EDWARD J [US] ET AL) 4 January 2007 (2007-01-04) abstract -----	29-38
A	US 2005/037775 A1 (MOEGLEIN MARK [US] ET AL) 17 February 2005 (2005-02-17) abstract paragraphs [0010] - [0012], [0055] - [0058], [0060] -----	29-38

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2008/079515

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 allsearchable 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 reportcovers 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: 1-16

Downloading RF measurements (taken by a femto cell to determine its location) into a user equipment, UE, database.

2. claims: 17-28

Downloading an average location of a femto cell into an UE's database from a server (which has means to average location information of the femto cell sent to the server by a plurality of UEs).

3. claims: 29-38

Downloading information pertaining to changes in macro cell environment.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2008/079515

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