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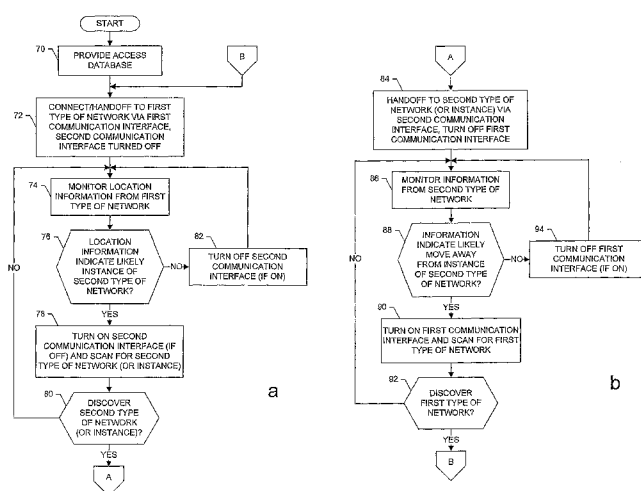
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MOBILE NODE, METHOD AND COMPUTER PROGRAM PRODUCT FOR HANDING OFF FROM ONE TYPE OF NETWORK TO ANOTHER TYPE OF NETWORK



(57) Abstract: A mobile node includes first and second communication interfaces for connecting to first and second types of networks, respectively. The mobile node also includes a processor capable of connecting to a first type of network via the first communication interface. The processor can monitor location information from the first type of network, the location information being representative of a geographic area within which the mobile node is currently located and available as a result of the connection to the first type of network. The processor can determine if the mobile node is currently located in an area associated with a second type of network based upon the monitoring of the location information. If so, the processor can turn on the second communication interface, and effectuate a handoff of the mobile node from the first type of network to the second type of network via the second communication interface.

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/IB2006/001345

## A. CLASSIFICATION OF SUBJECT MATTER

IPC: see extra sheet

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: H04L, H04Q

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

EPO-INTERNAL, WPI DATA, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
|-----------|---|-----------------------|
| X         | US 20030118015 A1 (MAGNUS GUNNARSSON ET AL),<br>26 June 2003 (26.06.2003), figures 4,5, claims 1,<br>11,30, abstract, [0018],[0022]-[0024]<br>--    | 1-36                  |
| X         | WO 2004110073 A2 (SIEMENS AKTIENGESELLSCHAFT),<br>16 December 2004 (16.12.2004), page 7,<br>line 10 - page 8, line 4, claims 1-4,<br>abstract<br>-- | 1-36                  |
| X         | US 20040259546 A1 (KUMAR BALACHANDRAN ET AL),<br>23 December 2004 (23.12.2004), figures 1,4,<br>abstract, [0024]-[0030]<br>--                       | 1-36                  |

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

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Date of the actual completion of the international search

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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. |
|-----------|---|-----------------------|
| X         | WO 03101138 A1 (MOTOROLA INC.), 4 December 2003<br>(04.12.2003), page 3, column 1, line 4 - column 14,<br>abstract, claims 1,5,7,8,17-19<br><br>----- | 1-36                  |

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Cited literature, if any, will be enclosed in paper form.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

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US 20030118015 A1 26/06/2003 NONE

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WO 2004110073 A2 16/12/2004 DE 10325339 A 24/02/2005

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US 20040259546 A1 23/12/2004 EP 1673903 A 28/06/2006

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WO 2004112317 A 23/12/2004

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WO 03101138 A1 04/12/2003 AU 2003226772 A 12/12/2003

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EP 1510100 A 02/03/2005

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GB 0211824 D 00/00/0000

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GB 2389005 A,B 26/11/2003

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US 20050250496 A 10/11/2005

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