

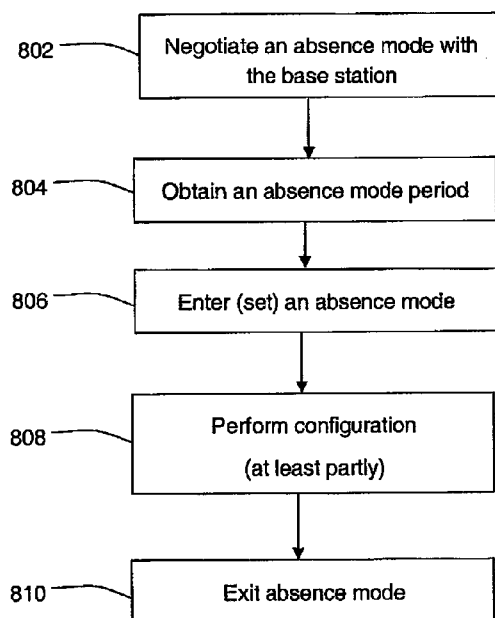


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- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

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(54) **Title:** SWITCHING ANTENNAS IN A WIRELESS DEVICE

FIG. 8



(57) **Abstract:** A method for configuring a terminal (100) in a wireless system comprising at least one terminal (100) and at least one base station (200), comprising: (a) negotiating between a terminal (100) with a base station (200) to obtain an absence period for the terminal; (b) setting the terminal (100) in an absence mode (such as an idle mode, sleep mode or handoff mode) with respect to the base station (200); and (c) at least partially configuring the terminal (100) independently of the base station (200), during the absence mode. Optionally, the configuration comprises switching antenna, handoff to a different base station, adjusting transmission and/or reception power, beam forming. Optionally, the wireless system conforms to a WiMax protocol.



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IL2009/000880

A. CLASSIFICATION OF SUBJECT MATTER

INV. H04W52/02 H04B7/08 H04B7/06
ADD. H04W48/20 H04W16/28

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 H04B

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.
X	WO 2006/000617 A (NOKIA CORP [FI]; SINIVAARA HASSE [FI]; BLACK SIMON [GB]; EDNEY JONATHA) 5 January 2006 (2006-01-05)	1-5, 19-30, 33, 34, 38-40, 43-45
Y	In combination with document EP 1 482 658 A abstract page 8, line 21 - page 9, line 24 page 16, line 6 - line 13 ----- -/--	6-13, 31, 32, 35, 41



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

"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.

"&" document member of the same patent family

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International application No

PCT/IL2009/000880

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2007/232358 A1 (SHERMAN ITAY [IL]) 4 October 2007 (2007-10-04)	1-5, 19-30, 33,34, 38-40, 43-45
Y	In combination with document EP 1 482 658 A abstract figure 2 paragraphs [0011], [0025], [0064], [0065], [0087] - [0090] -----	6-13,31, 32,35,41
Y	EP 1 482 658 A (NIPPON ELECTRIC CO [JP]) 1 December 2004 (2004-12-01) In combination with any one of documents WO 2006/000617 A and US 2007/232358 A1 abstract figure 9 paragraphs [0009], [0054], [0055], [0059] - [0073] -----	6-13,31, 32,35,41

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL2009/000880

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.:

1-13, 19-35, 38-41, 43-45

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: 1-13,19-35,38-41, 43-45

A method for configuring a terminal in a wireless system comprising at least one terminal and at least one base station, comprising:

- (i) negotiating between a terminal with a base station to obtain an absence period for the terminal;
 - (ii) setting the terminal in an absence mode with respect to the base station; and
 - (iii) at least partially configuring the terminal independently of the base station, during the absence mode, wherein
 - (iv) the configuration comprises switching antennas in a terminal comprising a plurality of antennas.
-

2. claims: 1, 14,15

A method for configuring a terminal in a wireless system comprising at least one terminal and at least one base station, comprising:

- (i) negotiating between a terminal with a base station to obtain an absence period for the terminal;
 - (ii) setting the terminal in an absence mode with respect to the base station; and
 - (iii) at least partially configuring the terminal independently of the base station, during the absence mode, wherein
 - (iv) the configuration comprises adjusting the power of the terminal.
-

3. claims: 1, 16, 17, 26, 36, 39, 42

A method for configuring a terminal in a wireless system comprising at least one terminal and at least one base station, comprising:

- (i) negotiating between a terminal with a base station to obtain an absence period for the terminal;
 - (ii) setting the terminal in an absence mode with respect to the base station; and
 - (iii) at least partially configuring the terminal independently of the base station, during the absence mode, wherein the
 - (iv) the configuration comprises forming a beam of one or more antenna at the terminal.
-

4. claims: 1, 18, 26, 37

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A method for configuring a terminal in a wireless system comprising at least one terminal and at least one base station, comprising:
(i) negotiating between a terminal with a base station to obtain an absence period for the terminal;
(ii) setting the terminal in an absence mode with respect to the base station; and
(iii) at least partially configuring the terminal independently of the base station, during the absence mode, wherein
(iv) the configuration comprises a handoff operation.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IL2009/000880

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2006000617 A	05-01-2006	CN 1973487 A EP 1762041 A1 US 2008194201 A1	30-05-2007 14-03-2007 14-08-2008
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